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Industrial Computer Source provides the broadest available offering of industrial computer chassis. While the standard product line is sufficient for most applications, there are occasions where an application will require modifications to a standard product. These modifications can range from a specific paint to match existing equipment, custom logos, electrical mechanical changes, or a completely custom chassis, designed from scratch to meet very specific environmental or performance criteria. The quantity can be a single chassis to production runs of hundreds or thousands. Industrial Computer Source is currently providing these services to a variety of customers; commercial, industrial and military. On time! Within budget!

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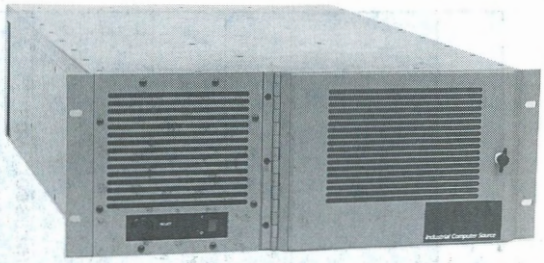
Careful examination of the task will generally show it is better to purchase a chassis built to your specifications. Industrial Computer Source uses automated CAD systems for all design aspects, speeding the design, modification and verification of new products. Parts are manufactured using computer controlled equipment for consistent quality. The second chassis will be identical in all regards to the first, and the 100th will be identical to the second. If changes are required, they are quickly implemented in CAD. Industrial Computer Source is experienced in manufacturing and our customer list reflects this experience. Call with your requirements for a quotation.

SYSTEMS

Purchasing a computer is usually the easiest part. A new computer is useless without all the required pheripherals; rack mount, power systems, environmental support, user interface, etc., you need to specify, purchase, and build. Do you need NEMA 4, 4X, or 12? What about EMI/EMC? A typical rack system can involve up to 20 or 30 vendors. Do you have the time to locate and work with that many different suppliers? What happens to your schedule when one vendor sends you the wrong part?



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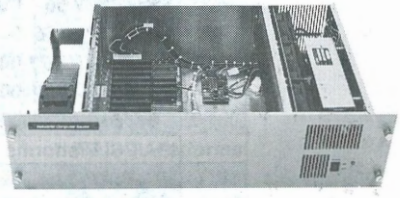
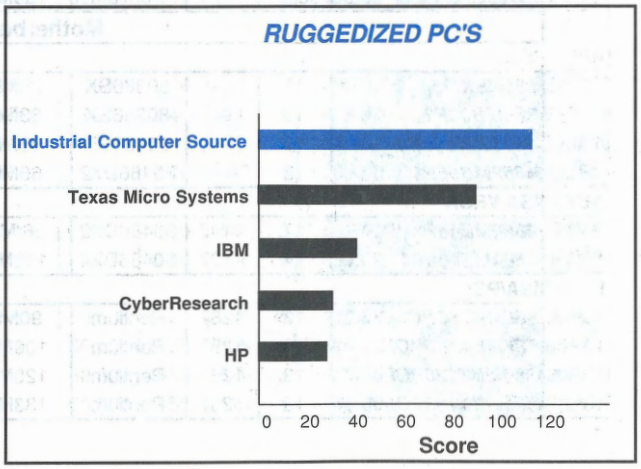


Multi-Purpose Modular Computer



CPU Comparison Chart

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FAX

Model	Page	Faxline Document #	Processor Type	CPU Clock Speed	Maximum RAM	Cache RAM	Serial Ports	Parallel Port	EIDE/Floppy Controller
Single Board Computers									
ISA Platforms									
SB386GX/25	12	—	80386SX	25MHz	16MB	None	2	1	Both*
SB386SX/25	12	—	80386SX	25MHz	16MB	None	2	1	Both*
SB386SXTC/33	11	1096	80386SX	33MHz	8MB	None	2	1	3 SSD
SB486SLTC/33	11	1096	486SLC	33MHz	8MB	None	2	1	3 SSD
SB486XPVN/33	10	1079	80486SX	33MHz	64MB	128K	2	1	Both
SB486XPV/33	10	1079	80486SX	33MHz	64MB	128K	2	1	Both
SB486XPV5/33	10	1079	80486SX	33MHz	64MB	512K	2	1	Both
SB4862PVN/66	10	1079	80486DX2	66MHz	64MB	128K	2	1	Both
SB4862PV/66	10	1079	80486DX2	66MHz	64MB	128K	2	1	Both
SB4862PV5/66	10	1079	80486DX2	66MHz	64MB	512K	2	1	Both
SB486PVN/100	10	1079	80486DX4	100MHz	64MB	128K	2	1	Both
SB4864PV/100	10	1079	80486DX4	100MHz	64MB	128K	2	1	Both
SB4864PV5/100	10	1079	80486DX4	100MHz	64MB	512K	2	1	Both
ISA/PCI Platforms									
SB486XP/33	9	1264	80486SX	33MHz	128MB	0 OR 256K	2	1	Both + SCSI-2
SB4862P/66	9	1264	80486DX2	66MHz	128MB	0 OR 256K	2	1	Both + SCSI-2
SB4864P/100	9	1264	80486DX4	100MHz	128MB	0 OR 256K	2	1	Both + SCSI-2
SB586P/90	8	1310	Pentium	90MHz	192MB	0 OR 256K	2	1	Both + SCSI-2
SB586PV/90	8	1310	Pentium	90MHz	192MB	0 OR 256K	2	1	Both + SCSI-2
SB586P/100	8	1310	Pentium	100MHz	192MB	0 OR 256K	2	1	Both + SCSI-2
SB586PV/100	8	1310	Pentium	100MHz	192MB	0 OR 256K	2	1	Both + SCSI-2
SB586P/120	8	1310	Pentium	120MHz	192MB	0 OR 256K	2	1	Both + SCSI-2
SB586PV/120	8	1310	Pentium	120MHz	192MB	0 OR 256K	2	1	Both + SCSI-2
SB586P/133	8	1310	Pentium	133MHz	192MB	0 OR 256K	2	1	Both + SCSI-2
SB586PV/133	8	1310	Pentium	133MHz	192MB	0 OR 256K	2	1	Both + SCSI-2
EISA Platforms									
SB586TE/90	call	1321	Pentium	90MHz	256MB	256K	2	1	Both*
SB586TE/100	call	1321	Pentium	100MHz	256MB	256K	2	1	Both*
SB586TE/120	call	1321	Pentium	120MHz	256MB	256K	2	1	Both*
SB586TE/133	call	1321	Pentium	133MHz	256MB	256K	2	1	Both*
Motherboards									
ISA									
386NSX/25	15	—	80386SX	25MHz	16MB	0K	2	1	Both*
386MB33P1	15	—	80386SX	33MHz	64MB	128K	2	1	Both*
486SXMB33P1	15	—	80486SX	33MHz	64MB	128K	2	1	Both*
4862MB66P1	15	—	80486DX2	66MHz	64MB	128K	2	1	Both*
ISA/VESA									
4862MB66P1VP	14	1197	80486DX2	66/MHz	128MB	256K	2	1	Both
4864MB100P1VP	14	1197	80486DX4	100MHz	128MB	256K	2	1	Both
ISA/PCI									
586MBT90PCI	13	1287	Pentium	90MHz	128MB	256K	2	1	Both
586MBT100PCI	13	1287	Pentium	100MHz	128MB	256K	2	1	Both
586MBT120PCI	13	1287	Pentium	120MHz	128MB	256K	2	1	Both
586MBT133PCI	13	1287	Pentium	133MHz	128MB	256K	2	1	Both

* IDE, not EIDE

Easy To Order - Fast Shipment

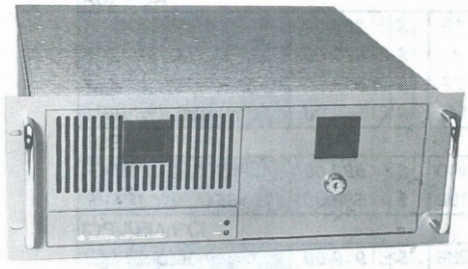
CPU Comparison Chart (cont.)

Video	Watchdog Timer	BIOS	Co-Processor Socket	Bus Speed (ISA)	MBTF P.O.H.'s	Operating Temperature	Norton S.I. (6.0)	Price	Model
Single Board Computers									
									ISA Platforms
VGA	Yes	AMI	Yes	SELECT	92,000	0-60°	21	$ 495.00	SB386GX/25
None	Yes	AMI	Yes	SELECT	92,000	0-60°	21	$ 645.00	SB386SX/25
None	Yes	Phoenix	NO	8MHz PC/104	90,000	0-60°	19	$ 695.00	SB386SXTC/33
None	Yes	Phoenix	NO	8MHz PC/104	90,000	0-60°	52	$ 795.00	SB486SLTC/33
None	Yes	AMI	Overdrive	8.3 MHz	77,900	0-60°	72	$ 1245.00	SB486XPVN/33
PCI XVGA	Yes	AMI	Overdrive	8.3 MHz	77,500	0-60°	72	$ 1395.00	SB486XPV/33
PCI XVGA	Yes	AMI	Overdrive	8.3 MHz	77,500	0-60°	72	$ 1545.00	SB486XPV5/33
None	Yes	AMI	Overdrive	8.3 MHz	77,900	0-60°	144	$ 1365.00	SB4862PVN/66
PCI XVGA	Yes	AMI	Overdrive	8.3 MHz	77,500	0-60°	144	$ 1515.00	SB4862PV/66
PCI XVGA	Yes	AMI	Overdrive	8.3 MHz	77,500	0-60°	144	$ 1665.00	SB4862PV5/66
None	Yes	AMI	Overdrive	8.3 MHz	77,900	0-60°	198	$ 1449.00	SB486PVN/100
PCI XVGA	Yes	AMI	Overdrive	8.3 MHz	77,500	0-60°	198	$ 1599.00	SB4864PV/100
PCI XVGA	Yes	AMI	Overdrive	8.3 MHz	77,500	0-60°	198	$ 1749.00	SB4864PV5/100
									ISA/PCI Platforms
None	Yes	AMI	Overdrive	8.3MHz	77,500	0-60º	72	$ 1349.00	SB486XP/33
None	Yes	AMI	Overdrive	8.3MHz	77,500	0-60°	144	$ 1469.00	SB4862P/66
None	Yes	AMI	Overdrive	8.3MHz	77,500	0-60°	198	$ 1559.00	SB4864P/100
None	Yes	AMI	Overdrive	8.3MHz	92,900	0-60°	288	$ 2119.00	SB586P/90
PCI XVGA	Yes	AMI	Overdrive	8.3MHz	92,500	0-60°	288	$ 2319.00	SB586PV/90
None	Yes	AMI	Overdrive	8.3MHz	92,900	0-60°	320	$ 2449.00	SB586P/100
PCI XVGA	Yes	AMI	Overdrive	8.3MHz	92,500	0-60°	320	$ 2899.00	SB586PV/100
None	Yes	AMI	Overdrive	8.3MHz	92,900	0-60°	384	$ 2899.00	SB586P/120
PCI XVGA	Yes	AMI	Overdrive	8.3MHz	92,500	0-60°	384	$ 3099.00	SB586PV/120
None	Yes	AMI	Overdrive	8.3MHz	92,900	0-60°	426	$ 3259.00	SB586P/133
PCI XVGA	Yes	AMI	Overdrive	8.3MHz	92,500	0-60°	426	$ 3459.00	SB586PV/133
									EISA Platforms
None	Yes	AMI	Overdrive	8.3MHz	80,000	0-60°	288	$ 2319.00	SB586TE/90
None	Yes	AMI	Overdrive	8.3MHz	80,000	0-60°	320	$ 2649.00	SB586TE/100
None	Yes	AMI	Overdrive	8.3MHz	80,000	0-60°	384	$ 3099.00	SB586TE/120
None	Yes	AMI	Overdrive	8.3MHz	80,000	0-60°	426	$ 3459.00	SB586TE/133
Motherboards									
									ISA
None	None	AMI	80387SX	8.3MHz	N/A	0-40º	19	$ 285.00	386NSX/25
None	None	AMI	Overdrive	8.3MHz	N/A	0-40º	21	$ 475.00	386MB33P1
None	None	AMI	Overdrive	8.3MHz	N/A	0-40º	72	$ 519.00	486SXMB33P1
None	None	AMI	Overdrive	8.3MHz	N/A	0-40º	140	$ 569.00	4862MB66P1
									ISA/VESA
None	None	AMI	Overdrive	8.3MHz	N/A	0-40°	140	$ 599.00	4862MB66P1VP
None	None	AMI	Overdrive	8.3MHz	N/A	0-40°	198	$ 689.00	4864MB100P1VP
									ISA/PCI
None	None	AMI	None	8.3MHz	60,000	0-55°	236	$ 919.00	586MBT90PCI
None	None	AMI	None	8.3MHz	60,000	0-55°	305	$ 1119.00	586MBT100PCI
None	None	AMI	None	8.3MHz	60,000	0-55°	374	$ 1439.00	586MBT120PCI
None	None	AMI	None	8.3MHz	60,000	0-55°	413	$ 1669.00	586MBT133PCI

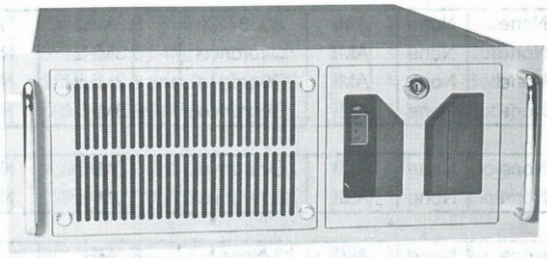
Chassis Comparison Chart

Model	Page	Mounting Configuration Options				Backplane Options		Bus Architecture Options			Number of Slots or Motherboard Mount	Power Supply Options				Fans #, VOL (CFM)	UL Recognized
		Rack	Bench	Floor	Wall/Panel	Passive	Motherboard Mount	ISA	EISA	PCI		120 VAC	240 VAC	12/24/48 VDC	Power Supply		
7520-34H	16	x				x		x	x	x	20, 2x10, 4x5	x	x	x	300, 350	4, 45	Yes & BELLCORE
7520-32V	18	x				x		x	x	x	20	x	x		315	2, 106	
7620-32V	18		x			x		x			20	x	x		315	2, 106	
7415-23V	20	x				x		x	x	x	15	x	x	x	250, 300	1, 24; 1, 106; (1, 106 OPT)	Yes
7408-23V	20	x					x				MB	x	x	x	250, 300	1, 24; 1, 106; (1, 106 OPT)	Yes
7515-33H	19	x				x		x	x	x	15	x	x		315	2, 106; 1,24	Yes
7508-33H	19	x					x				MB	x	x		315	2, 106; 1,24	Yes
7615-33H	19		x			x		x	x		15	x	x		315	2, 106; 1,24	Yes
7410-14H	24	x				x		x	x	x	10	x	x	x	250	1, 24; (1 ,106 OPT)	
7408-14H	24	x					x				MB	x	x	x	250	1, 24; (1 ,106 OPT)	
7310-24V	22	x				x		x	x	x	10	x	x	x	250, 300	1 OR 2 OPT	Pending
7308-24V	22	x					x				MB	x	x	x	250, 300	1 OR 2 OPT	Pending
8535, 8538	25	x					x	x	x		10, MB	x	x	x	250	1, 24; 1, 106; (1, 106 OPT)	
8308A	27	x	x		x	x		x			8	x	x		100	1, 106	
8540-RV	28	x				x		x	x	x	10, MB	x	x		250	1 ,24; 2 ,45	
8640-RV	28				x	x	x	x			10, MB	x	x		250	1 ,24; 2 ,45	
8630-R(x)	30	x				x	x	x	x		10, MB	x	x		250	1 ,24; 2 ,45	
8609-486	32				x		x	x			7	x	x		200	1, 30	Yes
8605	33				x	x	x	x			4	x	x		90	1, 45	
6250A	34			x		PC Enclosure										(2, 106 OPT)	
6200	35	x	x			PC Enclosure										(2, 106 OPT)	
7615-23V	37		x			x		x	x		15	x	x	x	250, 300	1, 24; 1, 106; (1, 106 OPT)	Yes
7608-23V	37		x				x				MB	x	x	x	250, 300	1, 24; 1, 106; (1, 106 OPT)	Yes
7610-14H	37		x			x		x	x		10	x	x	x	250	1, 24; 1, 106; (1, 106 OPT)	
7608-14H	37		x				x				MB	x	x	x	250	1, 24; (1 ,106 OPT)	
7620-XC	38		x			x		x			20	x	x		315	2, 106	
7500-XC	38	x				x		x			15	x	x		315	1, 106 (1 ,106 OPT)	
7600-XC	38		x			x		x			15	x	x		315	1, 106 (1 ,106 OPT)	
7915-33H	40			x		x		x			15	x	x		315	2, 106; 1 ,24	Yes
7918-33H	40			x			x				MB	x	x		315	2, 106; 1 ,24	Yes
7910-13H	40			x		x		x			10	x	x		250	1, 24; (1 ,106 OPT)	
7908-13H	40			x			x				MB	x	x		250	1, 24; (1 ,106 OPT)	
9200-06	41		x			x		x			6	x	x		250	1 ,30; 1 ,20	Yes
9200-10, -8MB	41		x			x	x	x	x	x(10)	10, MB	x	x	x	250	2 ,30; 1 ,20	Yes
OEMC-(chassis)	43	x	x		x	x	x	x	x	x(10)	4, 6, 10, MB	x	x	x		OPT	
8436	49	Portable				x		x			4	x	x	x	300	2 ,24	
8435	50	Portable				x		x			2	x	x		75	1 ,24	
EMC-CH(xx)	54				x	x		Proprietary			4, 6, 8	x	x	x	50	N/A	

Model 7310-24V



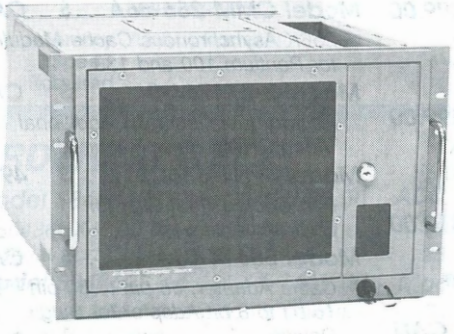
Model 7415-23V



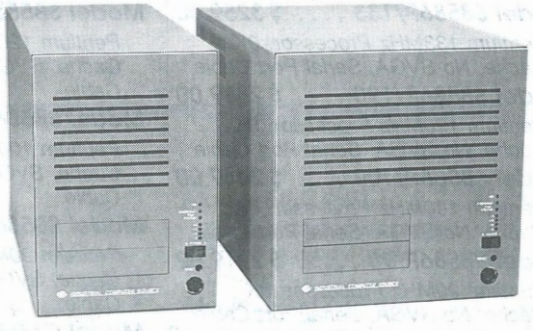
Chassis Comparison Chart

Disk Mounting [VD=Vibration Damping]				AT Keyboard Connector		Dimensions (millimeters)			Front Panel Indicator					Front Panel Controls			Base Price	Model
3.5" Int	5.25" Int	3.5" F.P.	5.25" F.P.	Front	Rear	Width	Depth	Height	On/Off	HD Active	Overheat	Fan Fail	P.S. Status	On/Off	Reset	Keylock		
			4	x	x	19" (483)	17" (432)	10.5" (267)	x	x	x	x	x	x	x	x	$ 1995.00	7520-34H
			2	x	x	19" (483)	23" (584)	7" (178)	x					x	x		$ 1849.00	7520-32V
			2	x	x	17" (432)	23" (584)	7" (178)	x					x	x		$ 1849.00	7620-32V
1VD		1	2VD	x	x	19" (483)	20.1" (510)	7" (178)	x	x	x	x	x	x	x	x	$ 1229.00	7415-23V
1VD		1	2VD	x	x	19" (483)	20.1" (510)	7" (178)	x	x	x	x	x	x	x	x	$ 1029.00	7408-23V
			3VD	x	x	19" (483)	23" (584)	7" (178)	x	x				x	x		$ 1889.00	7515-33H
			3VD	x	x	19" (483)	23" (584)	7" (178)	x	x				x	x		$ 1599.00	7508-33H
			3VD	x	x	17" (432)	23" (584)	7" (178)	x	x				x	x		$ 1899.00	7615-33H
			4	x	x	19" (483)	16.6" (422)	7" (178)	x					x	x		$ 1055.00	7410-14H
			4	x	x	19" (483)	16.6" (422)	7" (178)	x					x	x		$ 855.00	7408-14H
		1	3VD	x	x	19" (483)	17" (432)	7" (178)	x					x	x	OPT	$ 899.00	7310-24V
		1	3VD	x	x	19" (483)	17" (432)	7" (178)	x					x	x	OPT	$ 699.00	7308-24V
1VD		1	2VD	x	x	19" (483)	23" (584)	7" (178)	x	x	x	x	x	x	x		$ 3095.00	8535, 8538
		1		x		17" (432)	11.1" (282)	8.57" (222)	x					x	x		$ 3095.00	8308A
1VD		1VD	1VD	x	x	17" (432)	24" (610)	12.2" (310)	x	x	x	x	x	x	x	x	$ 4495.00	8540-RV
1VD		1VD	1VD	x	x	19.3" (490)	24" (610)	14.5" (368)	x	x	x	x	x	x	x	x	$ 4395.00	8640-RV
		1	2VD	x	x	19" (483)	24" (610)	8.75" (222)	x	x			x	x	x		$ 2695.00	8630-R(x)
1	1VD		1VD	x	x	19" (483)	18" (458)	12.2" (310)	x	x	x	x		x	x	x	$ 11535.00	8609-486
1VD				x	x	19" (483)	16.5" (412)	15.7" (399)									$ 6399.00	8605
						24" (610)	23" (584)	24.5" (672)									$ 995.00	6250A
						19" (483)	20.8" (528)	8.6" (218)									$ 395.00	6200
1VD		1	2VD	x	x	17" (432)	20.1" (510)	7" (178)	x	x	x	x	x	x	x	x	$ 1229.00	7615-23V
1VD		1	2VD	x	x	17" (432)	20.1" (510)	7" (178)	x	x	x	x	x	x	x	x	$ 1029.00	7608-23V
			4	x	x	17" (432)	16.6" (422)	7" (178)	x					x	x		$ 1055.00	7610-14H
			4	x	x	17" (432)	16.6" (422)	7" (178)	x					x	x		$ 855.00	7608-14H
						19" (483)	23" (584)	7" (178)	x					x			$ 1695.00	7620-XC
						19" (483)	23" (584)	7" (178)	x					x			$ 1475.00	7500-XC
						17" (432)	23" (584)	7" (178)	x					x			$ 1475.00	7600-XC
			3VD	x	x	7" (178)	25" (635)	17" (423)	x	x				x	x		$ 2059.00	7915-33H
			3VD	x	x	7" (178)	25" (635)	17" (423)	x	x				x	x		$ 1799.00	7918-33H
			3	x	x	7" (178)	17" (432)	17" (423)	x					x	x		$ 1155.00	7910-13H
			3	x	x	7" (178)	17" (432)	17" (423)	x					x	x		$ 955.00	7908-13H
1VD		2VD		x		6.6" (168)	15.7" (399)	9.5" (240)	x	x	x	x	x	x	x		$ 695.00	9200-06
1VD		2VD		x	MB	9.5" (241)	15.7" (399)	9.5" (240)	x	x	x	x	x	x	x		$ 645-1155	9200-10, -8MB
						Dependent on number of slots											$ 119-769	OEMC-(chassis)
1VD		1VD	1VD	x		15.4" (391)	8.4" (213)	9.7" (246)	x	x				x			$ 5869.00	8436
	1			x		18" (457)	13 (330)	6.5" (165)	x	x				x	x		$ 8549.00	8435
				x		Dependent on number of slots											$ 179.00	EMC-CH(xx)

Model 8540-RV



Model 9200-06/-10



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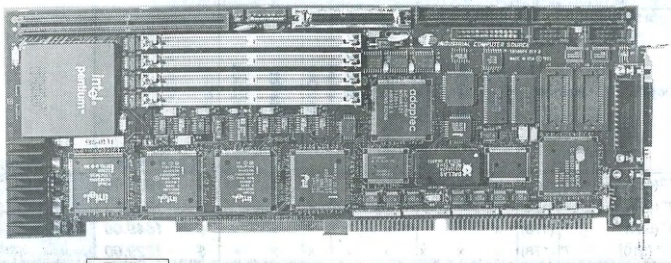
NEPTUNE 586 Single Board CPU

Model SB586PV/120



Faxline Document #:1310

NEW!

The Neptune II Pentium series CPUs provide full PCI bus support conforming to the PICMG standards. It is also capable of being installed into an ISA passive backplane without PCI expansion as a method for upgrading an older, slower system. Two basic models are available– one with an on-board PCI bus SVGA video adpater and one without. Other board features remain the same between models. Additional on-board controllers include PCI IDE and SCSI-2 disk controllers. The PCI bus controllers offer the fastest available throughputs with today's disk drives. The EIDE controller will support up to two drives with LBA and PIO mode 3 support for up to 12MB/Sec throughput speeds. The SCSI-2 controller offers support for either 8 bit SCSI devices alone, 16 bit Wide SCSI devices alone, or a mixture of 8 and 16 bit SCSI devices on a single cable using optional cable adapters. The adapters convert the 68 pin cabling to 50 pin cabling for 8 bit drives. See the following table of specifications for all controller features.

FEATURES

- Intel Neptune II Chip Set
- Pentium 90MHz through 133MHz Processors Supported
- Support for PCI Passive Backplanes
- On-Board PCI Disk Controllers
- Fast and Fast /Wide SCSI Support
- On-board SVGA PCI Video Controller Option
- Upgradeable Modular Cache Memory
- DEC PCI to PCI Bridge Support

SPECIFICATIONS

Processors Supported	Pentium 90, 100, 120 or 133MHz
Processor Clock Rate	60MHz External - 90, 120MHz Internal 66MHz External - 100, 133MHz Internal
Chip Set	Intel Neptune II
BIOS	AMI WinBIOS
ISA Bus Clock Rate	8.3MHz (64mA Drive Current)
PCI Bus Clock Rate	25, 30 or 33MHz Processor Dependent
Memory Capacity	192MB Maximum On-board, Fast Page Mode, 64 bits Wide
SIMM Support	2 Banks, 2 Sockets Each 256Kx36(1MB), 512Kx36(2MB) 1MBx36(4MB) 2MBx36(8MB) 4MBx36(16MB) 8MBx36(32MB) 16MBx36(64MB) (Bank 0 only)
Memory Speed Required	70nS or Faster
Cache Memory	0K External Installed 256K Optional Cache Module Asynchronous, 64 bit
EIDE Disk Controller	2 Fixed Disk Drives Supported on the PCI Local Bus.
SCSI-2 Disk Controller	Adaptec SCSI-2 7870 Controller Chip on the PCI Bus 8 bit Fast, 16 bit Fast/ Wide or Mixture
Floppy Controller	2 Floppy Drives up to 2.88M Supported
Video Controller (Optional)	Cirrus Logic Video Controller To 1280 X 1024NI Resolution 1MB DRAM Installed Upgradable to 2MB
Serial Ports	2 16550 Buffered Dual Header Connector with Cable to Rear Panel DB9P
Parallel Port	1 Centronics Bi-directional, Rear Panel DB25S EPP and EPC Enhanced Modes
Keyboard, Speaker & Reset Port	Single 8 pin Header Connector for System Interface
CMOS Battery	On-board, Included

OPERATING ENVIRONMENT

Temperature	0 to +60°C (Fan Cooled Heat Sink Recommended for Environments >+40°C)
Humidity	5 to 90% RHNC

ORDERING GUIDE

Model SB586P/133 . . . . $3259.00
Pentium 133MHz Processor, 0K Cache, No SVGA, Serial Port Cable

Model SB586P/120 . . . . $2889.00
Pentium 120MHz Processor, 0K Cache, No SVGA, Serial Port Cable

Model SB586P/100 . . . . $2449.00
Pentium 100MHz Processor, 0K Cache, No SVGA, Serial Port Cable

Model SB586P/90 . . . . . $2119.00
Pentium 90MHz Processor, 0K Cache, No SVGA, Serial Port Cable

Model SB586PV/133 . . . $3459.00
Pentium 133MHz Processor, 0K Cache, SVGA Video, Serial Port Cable

Model SB586PV/120 . . . $3099.00
Pentium 120MHz Processor, 0K Cache, SVGA Video, Serial Port Cable

Model SB586PV/100 . . . $2899.00
Pentium 100MHz Processor, 0K Cache, SVGA Video, Serial Port Cable

Model SB586PV/90 . . . . $2319.00
Pentium 90MHz Processor, 0K Cache, SVGA Video, Serial Port Cable

Model CMM-256-60A . $ CALL
256K Asynchronous Cache Module, for Pentium 90 and 120

Model CMM-256-66A . $ CALL
256K Asynchronous Cache Module, for Pentium 100 and 133

Model 3-274764-0 . . . . $ CALL
Factory Installed 1MB Additional Video DRAM (2ea. Required)

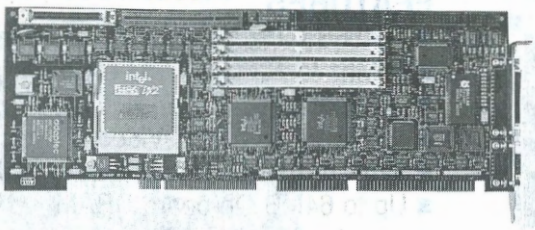
Model SPN1-586CL . . . . $ 49.00
Fan Cooled Heat Sink for Environments >+40° C

Model 50314-01A . . . . . $ CALL
Cable Adapter, 68 pin to 50 pin F-F, 16 bit to 8 bit Adapter for Single Device

Model 50313-01A . . . . . $ CALL
Cable Adapter, 68 pin to 50 pin M-M, 16 bit to 8 bit Cable Adapter

ARIES 486 Single Board CPU

Model SB4864P/100



Faxline Document #:1264

NEW!

FEATURES

- Intel Aries Chip Set
- 486SX through 486DX4 Processors Supported
- Support for PCI Passive Backplanes
- On-Board PCI Disk Controllers
- Fast and Fast/ Wide SCSI Support
- Upgradable Modular Cache Memory
- 64mA ISA Bus Drive Current
- DEC PCI to PCI Bridge Support

The Aries 486 series CPUs offer the state of the art technology for PCI, or ISA, passive backplane architectures. The board provides full PCI bus support conforming to the PICMG standards. It is also capable of being installed into an ISA passive backplane without PCI expansion as a method for upgrading an older, slower system. The on-board disk controllers are supported on the PCI bus for the fastest available throughputs with todays disk drives. The EIDE controller will support up to two drives with LBA and PIO mode 3 support for up to 12MB/Sec throughput speeds. The SCSI-2 controller offers both 8 bit only and combination 8/16 bit bus support. Fast and Fast/Wide drives may be mixed on the system in the 16 bit mode with the use of optional cable adapters. The adapters convert the 68 pin cabling to 50 pin cabling for 8 bit drives. Refer to the Specifications for all controller features.

SPECIFICATIONS

Processors Supported	80486SX, 80486DX, 80486DX2, 80486DX4, Pentium Overdrive (P24T) Installed in ZIF Socket for Easy Upgradability
Processor Clock Rate	33MHz External, 33/66MHz (DX2), 33/100MHz (DX4), and 33/84MHz (P24T)
Chip Set	Intel Aries
BIOS	AMI WinBIOS
ISA Bus Clock Rate	8.3MHz (64mA Drive Current)
PCI Bus Clock Rate	33MHz
Memory Capacity	128MB Maximum On-board, Fast Page Mode, 32 bits Wide
SIMM Support	4 Banks, 1 Socket Each 256Kx36(1MB), 512Kx36(2MB) 1MBx36(4MB) 2MBx36(8MB) 4MBx36(16MB) 8MBx36(32MB)
Memory Speed Required	70nS or Faster
Cache Memory	Internal Cache on Processor (Except 80486SX) 0K External Installed 256K Optional Cache Module Aynchronous, 32 bit
IDE Disk Controller	2 Fixed Disk Drives Supported on the PCI Local Bus Secondary Controller Support LBA and PIO Mode 3 Support
SCSI-2 Disk Controller	Adaptec SCSI-2 7870 Controller Chip on the PCI Bus 8 bit Fast, 16 bit Fast/ Wide or Mixture
Floppy Controller	2 Floppy Drives up to 2.88M Supported
Serial Ports	2 16550 Buffered Isolated to 1500V 1 Rear Panel DB9P and 1 10 pin Header Cable supplied for 10 pin Header to Rear Panel DB9P
Parallel Port	1 Centronics Bi-directional, Rear Panel DB25S EPP and EPC Enhanced
Keyboard, Speaker & Reset Port	Single 8 pin Header Connector for System Interface
CMOS Battery	On-board, Included
Operating Environment	Temperature: 0 to +60°C (Fan Cooled Heat Sink Recommended for Environments >+40°C) Humidity: 5 to 90% RHNC
Storage Environment	Temperature: -20 to +85°C Humidity: 5 to 95% RHNC
Operating Altitude	10,000 ft

ORDERING GUIDE

Model SB4864P/100 . . . $ 1559.00
80486DX4/100 Processor, 0K Cache, Serial Port Cable

Model SB4862P/66 . . . . $ 1469.00
80486DX2/66 Processor, 0K Cache, Serial Port Cable

Model SB486XP/33 . . . . $ 1349.00
80486SX/33 Processor, 0K Cache, Serial Port Cable

ACCESSORIES

Model CMM-256-20 . . . $ CALL
256K Asynchronous Cache Module

Model SPN1-486Z . . . . . $ 49.00
Fan Cooled Heat Sink for Environments >+40°C

Model 50314-01A . . . . . $ CALL
Cable Adapter, 68 pin to 50 pin F-F, 16 bit to 8 bit Adapter for Single Device

Model 50313-01A . . . . . $ CALL
Cable Adapter, 68 pin to 50 pin M-M, 16 bit to 8 bit Cable Adapter

PCI Performance for ISA Bus Systems
Full Featured CPU PCI Video & EIDE

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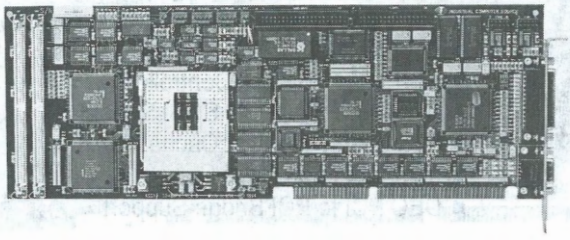
Model SB486PV Series



FEATURES

- 80486SX Through P24T Processors
- 33Mhz to 100Mhz CPU Clocks
- On-board PCI Bus EIDE
- SVGA Video & Non-Video Models
- 128K or 512K External Cache RAM
- Up to 64MB On-board DRAM

NEW!

Faxline Document #:1079

Now Available in Non-Video Version!

Made in USA

The SB486PV CPU Series is designed to bring today's high performance PCI bus capabilities to Single Board Plug-In ISA Bus systems. Compatible with older ISA bus systems, the SB486PV can replace outdated 80286 through slower 80486 systems with the latest available. Take advantage of one of the main features of a passive backplane and the SB486PV's CPU – upgradability. The processor is installed in a ZIF (Zero Insertion Force) socket for easy replacement with higher performance processors should the need arise. The CPU Clock rate is set by jumpers on the board. There is also an on-board 3.3V regulator that will automatically detect the 80486DX4 processor from Intel for a 100Mhz system! The socket also supports the Pentium Overdrive 63Mhz and 83Mhz processors.

SPECIFICATIONS

Processors Supported	80486SX, 80486SX2, 80486DX, 80486DX2, 80486DX4 and P24T in a ZIF Socket
Processor Clock Rate	25Mhz, 33Mhz, 25/50Mhz, 33/66Mhz, 25/75Mhz, 33/100Mhz and 63Mhz(P24T)
Chip Set	Intel Saturn-2 Chip Set
BIOS	AMI WinBIOS Full Feature, FLASH, Field Upgradable (software)
Memory Capacity	4MB to 64MB Maximum On-board
SIMM Support	1 Bank, 2 Sockets, 72-Pin, Interleaved Supports 512Kx36(2MB), 1Mx36(4MB), 4Mx36(16MB), 8Mx36(32MB) SIMMs
Memory Speed Required	70 nS or faster
Cache Memory	128K or 512K Write-Back or Write-Through Dependent on Processor
Video Controller (PCI Bus Optional)	SVGA to 1024x768 x 256 Colors, NI 1MB RAM Cirrus Logic GD543X Chip 24.9M WinMarks
EIDE Disk Controller (PCI Bus)	2 drive capacity, Utilizes Multiple Read/Write Drives, PCTech RZ1000 Chip. Support for a secondary IDE controller, installed in an open ISA Expansion Slot Permitting up to Four IDE Drives to be Installed in the system.
Floppy Controller	2 Floppy drives to 2.88M Supported
Serial Ports	2 16550 Compatible, 16 byte FIFO buffer, Transmit and Receive, Internal Cables Included
Parallel Port	Centronics compatible, compatible with software "dongle" keys, Rear Panel DB25S
Keyboard Port	5-Pin Header
Speaker Port	4-Pin Header
Reset Port	2-Pin Header
Watchdog Timer	150ms Period or Vcc <4.75VDC, software reset
Dimensions (L x H)	13.345" x 4.75" (399mm x 66mm) Exclusive of mounting bracket 8 Layer Construction When fittted with a CPU Chip Cooling Fan, the CPU will require two expansion slots although a half-length to 2/3 length feature board can be installed next to it.
Power Requirement	+5V @ 1.4A without CPU or DRAM, Add Approx 1.0A for Processor +12V @ <100mA, -12V @ <100mA, The +5V is Regulated Down to 3.3V at the ZIF Socket for Processor Chips Requiring it.
Operating Environment	Temperature: 0 to +60°C Humidity: 5 to 95% RHNC
Storage Environment	Temperature: -20 to +85°C Humidity: 5 to 95% RHNC
Operating Altitude	10,000 ft
MTBF	>77,500 P.O.H. @ 25°C

ORDERING GUIDE

Model SB4864PV5/100 . $1749.00
80486DX4, 100Mhz CPU, 512K Cache RAM, Serial Port Connectors

Model SB4864PV/100 . . $1599.00
80486DX4, 100Mhz CPU, 128K Cache RAM, Serial Port Connectors

Model SB4864PVN/100 $1449.00
80486DX4, 100Mhz CPU, 128K Cache RAM, Serial Port Connectors, No SVGA

Model SB4862PV5/66 . . $1665.00
80486DX2, 66Mhz CPU, 512K Cache RAM, Serial Port Connectors

Model SB4862PV/66 . . . $1515.00
80486DX2, 66Mhz CPU, 128K Cache RAM, Serial Port Connectors

Model SB4862PVN/66 . $1365.00
80486DX2, 66Mhz CPU, 128K Cache RAM, Serial Port Connectors, No SVGA

Model SB486XPV5/33 . . $ 1545.00
80486SX, 33Mhz CPU, 512K Cache RAM, Serial Port Connectors

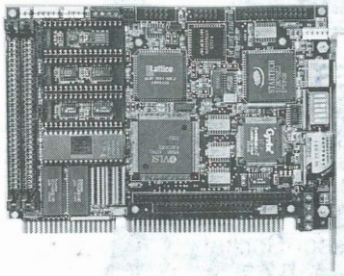
Model SB486XPV/33 . . . $ 1395.00
80486SX, 33Mhz CPU, 128K Cache RAM, Serial Port Connectors

Model SB486XPVN/33 . $ 1245.00
80486SX, 33Mhz CPU, 128K Cache RAM, Serial Port Connectors, No SVGA

Highest Quality

Embedded System CPUs
with PC/104 Bus

Model SB386SXTC/33



Faxline Document #:1096

FEATURES

- Half-Length Size
- 386SX or 486SLC Processors
- +5VDC Operation
- Watchdog Timer
- PC/104 Bus
- MS-DOS in ROM

Made in USA

The SB386SXTC Embedded System CPUs are available with a choice of two CPUs. The "SB" series include three JEDEC compatible sockets for solid state disk drives of up to 512K, each in addition to the on-board ROM-DOS. These 32 pin device sockets can be FLASH ROM, EPROM or SRAM with on-board battery back-up. The dual 82550 compatible Serial Ports function as the standard COM1 and COM2 ports for PC applications. The second Serial Port can be configured as RS232 or as RS422/485. COM1 can be switch selected to boot up as the CTTY port eliminating the need for a local keyboard or video adapter. Either serial port can be disabled by jumper selection on the board. Support is included for 8-bit and 16-bit PC/104 option cards. The Watchdog Timer function adds system robustness by asserting a software controlled system reset if the application program stops running. The user software resets the Watchdog Timer register within a specified time interval to reset the time and prevent the reset.

See Page 60 for Memory. Call for more information on Network Operating Systems.

SPECIFICATIONS

Processors Supported	80386SX/33Mhz 486SLC/33Mhz
Procesor Clock Rate	33Mhz on 80386SX and 486SLC/33
BIOS	Phoenix Industrial
ISA Bus Speed	8Mhz
Bus Drive Current	12mA
Memory Capacity	1MB On-Board (Std.) 8MB Maximum On-board
SIMM Support	1 bank, 2 Sockets Supports 256Kx9, 1Mx9 and 4Mx9 SIMMs. (Installation of 4MB SIMMs Disables the On-board 1MB of RAM)
Memory Speed Required	80ns or faster
Solid State Disk Sockets	One 32 bit JEDEC Socket, SSD0, Dedicated ROM-DOS Three 32-bit JEDEC Sockets, SSD1, SSD2, SSD3 3.6V Battery Back-up Selectable per Socket Similar Devices Become One Single Drive EPROM, FLASH or SRAM Supported
Devices Supported	128Kx8 SRAM, 512Kx8 SRAM, 128Kx8 FLASH ROM, 512Kx8 FLASH ROM 128Kx8 EPROM, 256Kx8 EPROM, 512Kx8 EPROM
Memory Mapping	16KB Window for Solid State Drives Bank Switching
Starting Address	D0000H, D4000H, or D8000H
Serial Ports	2, 82550 Compatible, 10-Pin Header COM1: RS232, Jumper Selected as CTTY COM2: RS232 or RS422/RS485, Jumper Terminated
Parallel Port	1, Centronics Compatible
Keyboard Port	PS/2 Connector on Rear Panel and 5-Pin Header Connector
Speaker Port	4-Pin Header
Reset Port	2-Pin Header
Watchdog Timer	I/O Mapped Period - 150 msec. or 600 msec. or Disabled
Expansion Slots	PC/104 Connectors
Power Requirement	+5V @ 0.5A Typical 4 Position Screw Terminal for External Power Hook-up
Size	4.6" x 6.5" (116 x 165mm)
Operating Environment	Temperature: 0 to +60°C
Storage Environment	Temperature: -20 to +70°C Humidity: 5 to 90% RHNC
MTBF	90,000 P.O.H. @ 75°C

ORDERING GUIDE

FULL FEATURED

Model SB486SLTC/33 . . $ 795.00
Fully Featured, 1MB RAM, 486SLC/ 33Mhz Processor

Model SB386SXTC/33 . . $ 695.00
Fully Featured, 1MB RAM, 80386SX/ 33Mhz Processor

ACCESSORIES

Model 128KX8S . . . . . $ CALL
128K x 8 SRAM Device

Model 512KX8S . . . . . $ CALL
512K x 8 SRAM Device

Model 128KX8F . . . . . $ CALL
128K x 8 FLASH Device

Model 512KX8F . . . . . $ CALL
512K x 8 FLASH Device

80386SX Based Single Board CPUs

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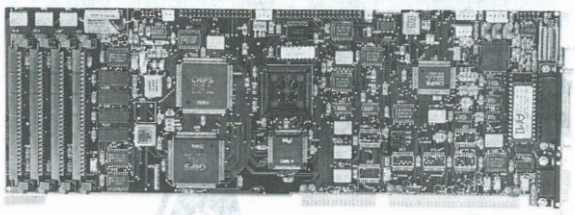
Model SB386SX/25



FEATURES

- 80386SX, 25Mhz
- 16MB RAM Capacity On-Board
- On-Board System Controllers
- Watchdog Timer
- Co-Processor Socket

Made in USA

The SB386SX/25 offers full on-board system controller features for disk drives, and communication ports. Two each floppy and IDE fixed disk drives may be interfaced along with up to two serial port devices and a parallel Centronics compatible printer port. The system memory sockets will accept up to 16MB of 60nsec DRAM for 0 Wait State performance.

The SB386GX/25 adds an on-board VGA video controller to the system features. For expansion slot critical applications, this board will save the slot normally required for your video adapter.

See Page 60 for Memory. Call for more information on Network Operating Systems.

SPECIFICATIONS

Processors Supported	80386SX
Processor Clock Rate	25Mhz
Co-Processor Support	Socket for Optional 387SX
Chip Set	C & T
BIOS	AMI Hi-Flex Password Feature SETUP ROM Resident
ISA Bus Clock Rate	8.3Mhz
Memory Capacity - DRAM	16MB Maximum On-board
SIMM Support	2 Banks, 2 Sockets Each 2 Banks, 4 Sockets Each (SB386GX) Supports 256Kx9, 1Mx9 and 4Mx9 SIMMs
Memory Speed Required	70ns or faster. (60ns on SB386SX/25)
Video Controller (SB386GX only)	DB15S VGA Connector 640x480 x 16 Colors 800x600 x 16 Colors 60Hz Refresh
IDE Disk Controller	2 Fixed Disk Drives Supported
Floppy Controller	2 Floppy Drives Supported
Serial Ports	2 - Rear Panel DB9P for COM1 (Not SB386GX) One 10-Pin Header for COM1 (SB386GX only) One 10-Pin Header for COM2 (requires CMPIO-SER) Internal Cables included with SB386GX only
Parallel Port	1, Rear Panel DB25S
Keyboard Port	5-Pin Header
Speaker Port	4-Pin Header
Reset Port	2-Pin Header
Watchdog Timer	1.2 Second Period, Software Reset, Jumper Enable/ Disable
CMOS Battery	On-Board, Included
Operating Environment	Temperature: 0 to +60°C Humidity: 5 to 90% RHNC
Power Requirements	+5V @ 1.4A (2.5A for SB386GX) +12V @ <100mA (<50mA for SB386GX) -12V @ <100mA (<50mA for SB386GX)
MTBF	>90,000 P.O.H. (>63,000 - SB386GX)

ORDERING GUIDE

Model SB386SX/25 . . . . $ 645.00
80386SX, 25Mhz

Model SB386GX/25 . . . $ 495.00
80386SX, 25Mhz, VGA Video
WHILE SUPPLIES LAST!

ACCESSORIES

Model CMPIO-SER . . . . $ 25.00
Cable, Serial Port 2, 10 pin IDC to DB-9P

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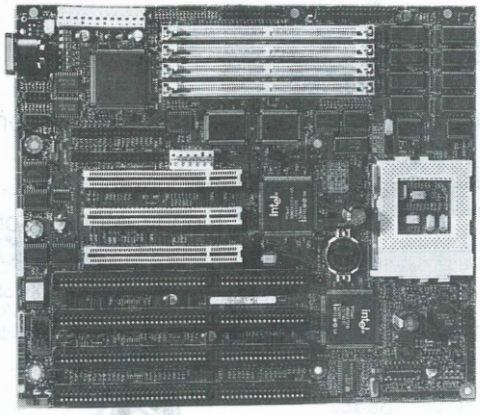
FAX

Pentium PC Motherboards

Model 586MBTPCI Series

Faxline Document #:1287



FEATURES

- 90,100 or 120 MHz Pentium Processor
- Integrated PCI EIDE, with Bus Mastering Support
- PCI Local Bus
- Completely Plug and Play
- Small Footprint

NEW!

These third generation Pentium processor-based designs offer better price performance points over older generation products.

MAXIMUM EXPANDABILITY

The 586MBTPCI family offers 4 ISA slots, 3 PCI slots, and 1 slot that can be used as either an ISA or PCI slot. All slots are open for your needs thanks to the integrated I/O functions: two serial ports and one parallel port, plus floppy, IDE, and keyboard controller. An on-board PCI EIDE controller provides high performance drive access with data transfer rates reaching 16 MB/sec.

HIGH PERFORMANCE-GREAT VALUE

With support for the Pentium 90, 100 or 120 MHz Intel processor, the 58MBTPCI family offers the performance to drive the most demanding applications. This performance comes at a terrific value, since the Pentium processor is now available in the price range of many i486™ processor-based products.

New features - like 100 MB/sec. PCI Data Streaming, mode 4 Bus Mastering IDE, and infrared - provide great performance and enable tomorrow's new multimedia and wireless communications applications. The system board ensures ease-of-use with the latest software and BIOS capabilities, including Plug and Play, Advanced Power Management, and Built-in readiness for Windows95.

The power of the Pentium processor is unleashed, thanks to the PCI local bus. PCI local bus offers high performance expansion for graphics, networking, disk controllers, multimedia devices, and other items. The Motherboard is expandable to 128 MB, upgradeable with either EDO or Fast Page Mode DRAM.

SPECIFICATIONS

Processor Supported	Intel Pentium
Processor Clock Rate	90Mhz, 100Mhz or 120MHz
Chipset	Intel Triton
BIOS	Flash AMIBIOS
ISA Bus Clock Rate	8Mhz
PCI Local Bus Clock Rate	30Mhz
Memory Capacity	128MB Maximum On-board
SIMM Support	2 Banks, 2 Sockets Each, 72-pin. Burst Mode Read/Write Support, Upgradeable with EDO or Fast Page Mode DRAM Devices. 1Mx32(4MB), 2Mx32(8MB), 4Mx32(16MB), or 8Mx32(32MB) SIMMs.
Memory Speed Required	70ns or faster
Cache	Intel Triton 82437FX Controller 256 KB
EIDE Disk Controller	4 Fixed Disk Drives Supported on the PCI Local Bus (Intel Triton PIIX)
Floppy Controller	2 Floppy Drives to 2.88M Supported
Serial Ports	2 RS-232C, 16C550 Compatible
Parallel Port	Centronics Compatible, Bidirectional, Enhanced Capabilities Port
Keyboard Port	AT Style
Speaker Port	4 Pin Header
Reset Port	2 Pin Header
CMOS Battery	On-board, Included
Expansion Slots	3 Dedicated ISA Slots 2 Dedicated PCI Slots 1 Shared Slot, ISA Or PCI
Board Type	Mini AT
Size (W x L)	8.6" x 10.0" (218.4 x 254mm)
Operating Environment	Temperature +10 to 50°C (PC Cooler HeatSink recommended for environments greater than 40°C) Humidity 5-85% @ 35°C

ORDERING GUIDE

Model 586MBT133PCI. . $ 1669.00
System board, 133MHz Pentium, 256K Cache

Model 586MBT120PCI. . $ 1439.00
System board, 120MHz Pentium, 256K Cache

Model 586MBT100PCI. . $ 1119.00
System board, 100MHz Pentium, 256K Cache

Model 586MBT90PCI. . . $ 919.00
System board, 90MHz Pentium, 256K Cache

ACCESSORY

Model SPN1-586Z . . . . . $ 49.00
Fan cooled heat sink. Recommended for environments >40° C

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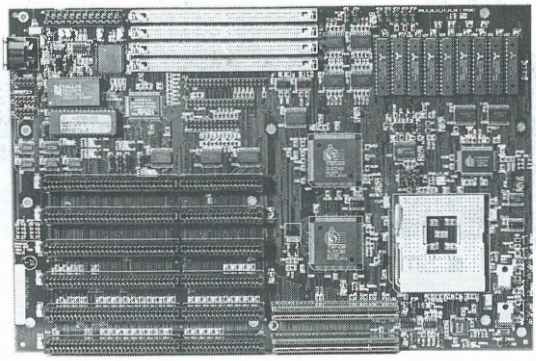
ISA/VESA 486 Motherboard

P1VP Series



FEATURES

- 486SX Through 486DX4 Processors
- 256K Cache RAM
- Ready for Pentium Overdrive
- On-board EIDE, Floppy, Mouse Controllers

Made in USA

NEW!

Faxline Document #:1197

The P1VP series motherboards take a major bite out of obsolescence by phenomenal and easy upgradability. The boards include four ISA, 16-bit expansion slots as well as two bus-mastering, 32-bit VESA expansion slots.

On board controllers included enhanced dual fixed disk drive controller, floppy disk drive controller, dual serial port, single parallel port and a PS/2 compatible mouse port.

The on-board PS/2 mouse controller also includes a cable and connector for the rear panel of the chassis. The port is enabled or disabled by jumper selection on the board.

SPECIFICATIONS

Processors Supported	80486DX2, 80486DX4, or P24T in a ZIF socket
Processor Clock Rate	33/66MHz, 33/100MHz, 33/63MHz (P24T)
BIOS	AMI BIOS with Auto Drive Detect
ISA Bus Clock Rate	8.3MHz
Memory Capacity	64MB Maximum On-board
SIMM Support	2 Banks, 2 Sockets Each, 72-pin, Interleaved Supports 256k x 36(1MB), 512k x 36(2MB), 1M x 36(4MB), 2M x 36(8MB), and 4M x 36(16MB) SIMMs
Memory Speed Required	70nS or Faster Recommended for 0 Wait States
Cache Memory	256K Cache External 8K Cache Internal to Processor
EIDE Disk Controller	2 Fixed Disk Drives
Floppy Controller	2 Floppy Drives to 2.88MB Supported
Serial Ports	2 16550 Compatible, Internal Cables Included
Parallel Port	1 Centronics Compatible, Internal Cable Included
Keyboard Port	AT Style
Speaker Port	4-pin Header
Reset Port	2-pin Header
Mouse Port	PS/2 Compatible, Internal Cable Included
CMOS Battery	RTC with Lithium Battery
Expansion Slots	6 ISA, 16 bit, 2 Shared with VESA Heat sinks, cooling fans and voltage regulators may affect the use of the expansion slots for some feature cards.
Board Type	Baby-AT
Size	8.6" x 13" (218 x 330mm)
Operating Environment	Temperature: 0 to 50°C Humidity: 5 to 90% RHNC

ORDERING GUIDE

Model 4864MB100P1VP ..... ***$ 689.00***
80486DX4, 100MHz Processor, 256k Cache

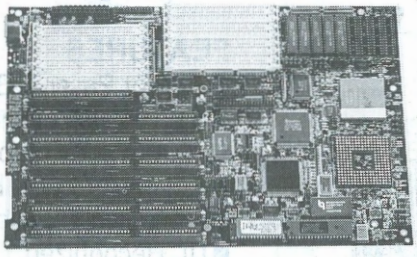
Model 4862MB66P1VP ..... ***$ 599.00***
80486DX2, 66MHz Processor, 256k Cache

ACCESSORY

Model SPN1-486Z ..... ***$ 49.00***
Heat Sink Chip Cooling Fan (Recommended for Environments >40 °C)

Upgradeable Full Featured Motherboard

Model 386MB33P1



FEATURES
- 386 or 486 System Board
- 128K Cache Memory
- On-Board System Controllers

SPECIFICATIONS

Processors Supported 386DX, 486SX, 487SX, 486SX/Overdrive, 486DX, 486DX/2

Co-Processor Support Socketed

BIOS AMI

Memory Capacity - DRAM 64MB Maximum On-Board

SIMM Support 4 Banks, 4 Sockets Each, 60-pin 256Kx9 (256KB), 1Mx9 (1MB), 4Mx9 (4MB) SIMMs

Memory Speed Required 80ns or faster (except 486DX/50Mhz) 60ns or faster for the 486DX/50Mhz

Cache Memory 128kB on board

IDE Disk Controller 2 Fixed Disk Drives supported

Floppy Controller 2 Floppy Drives to 1.44M Supported

Serial Ports 2

Parallel Port 1

Keyboard Port AT Type

Mouse Port PS/2 Type, Internal Cable Included

Size 8.6" x 13.0" (218 x 330mm)

ORDERING GUIDE

Model 4862MB66P1 . . . $ 569.00
80486DX2/66Mhz, 128K Cache, Cables, Manual

Model 486SXMB33P1 . . $ 519.00
80486SX/33Mhz, 128K Cache, Cables, Manual

Model 386MB33P1 . . . . $ 475.00
80386/33Mhz, 128K Cache, Cables, Manual

CABLES

Model 50090-01 . . . . . $ 13.00
IDE drive/controller cable, 24"

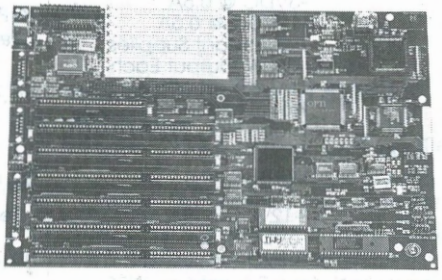
Model 50091-01 . . . . . $ 13.00
Floppy drive/controller cablem, 24"

When ordered as a part of a system, all required cables will be included at no additional charge.

Full Featured 80386SX/25Mhz Motherboard

Model 386NSX/25

Made in USA



FEATURES
- 80386SX 25Mhz
- To 16MB RAM
- Full System Features
- AMI BIOS

SPECIFICATIONS

Co-Processor Support Socket for 80387SX

BIOS AMI

Memory Capacity 16MB Maximum On-board

SIMM Support 4 Banks, 2 Sockets Each 60-pin 256Kx9 (256KB), 1Mx9 (1MB) or 4Mx9 (4MB)SIMMs

Memory Speed Required 70ns or faster for 0 wait state

IDE Disk Controller 2 Fixed Disk Drives Supported

Floppy Controller 2 Floppy Drives to 1.44M Supported

Serial Ports 2

Parallel Port 1

Keyboard Port AT Type

Mouse Port PS/2 Type, Internal Cable Included

Size 8.6" x 13.0" (218 x 330mm)

ORDERING GUIDE

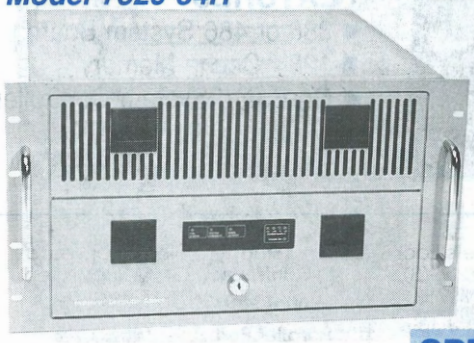
Model 386NSX/25 . . . . $ 285.00
80386SX, 25Mhz, controllers, manual, cables, utility disk

See Page 60 for Memory. Call for more information on Network Operating Systems.

20 Slot Rack Mount Chassis
with High Drive Capacity

NEW EISA & ISA/ PCI Models

Model 7520-34H



FEATURES

- 20 Slot Passive Backplane
- Up to 4 Half Height Disk Drives
- 300W Power Supply
- Optional 48VDC Input Mains
- Front Panel System Status Display
- UL Recognized
- Split Backplane Models Available
- New EISA & PCI Models Available
- Optional Redundant (N+1) Power Supplies

Made in USA

The 7520-34H is one of the newest models of 20 slot chassis available from Industrial Computer Source. The 7520-34H has been designed to take best advantage of the 20 slot passive backplane architecture used in prior models. Additional drive mount capacity has been provided to allow up to four half-height disk drives to be located in the lower half of the chassis. The drives can be easily replaced from the front of the chassis for maintenance or upgrade. Room is available for the removable drive carriers shown later in this Source-Book. The front panel includes a system status view port that includes LED indicators for critical system modules including the cooling fans, power supply and disk activity.

SPLIT BACKPLANE MODELS

The 7520-34H chassis is also available in special models that incorporate additional circuitry to permit "splitting" the backplane into as many as five sections. Standard configurations are offered with 10-10 & 5-5-5-5 splits. Each section has its own mini-DIN (PS/2) keyboard interface and reset button available at the rear panel of the chassis. Adapter plugs are provided for each backplane segment from mini-DIN to 5-pin DIN AT keyboard connectors. Call to discuss your particular requirements with one of our sales applications engineers.

REDUNDANT POWER SUPPLIES

The 7520-34H chassis may also be ordered with an optional redundant power supply feature. In this configuration the chassis includes two separate 300W power supplies in a N+1 configuration. The two supplies share the current load during normal operation. In the event one supply fails, the other supply can carry the full 300W load. A front panel LED indicates normal operation for each supply and an audible alarm sounds in the event of a failure. The defective supply can then be hot swapped with a spare module without interrupting system operation.

SPECIFICATIONS

Mounting	Rack
Backplane	Passive
Bus Architecture	ISA, EISA, or PCI
Number of Slots	ISA- 20 Full Length EISA- 15 Full Length EISA 5 Full Length ISA PCI-16 Full Length ISA 2 Full Length PCI 1 Dedicated CPU Slot
Split Backplanes	2 x 10 Slot in Model 7522-34H 4 x 5 Slot in Model 7524-34H Other Configurations Available

POWER SUPPLY

AC Input	90-130/180-265 Input, 47-63Hz, Switch Selected 300W Ouput +5VDC @ 30A +12VDC @ 12A -5VDC @ 0.5A -12VDC @ 0.5A Redundant Supplies 300W Output Each N+1 Automatic Hot Swappable Alarm Signal on Failure
DC Input	Optional 48VDC Power Input 350W Output +5VDC @ 50A +12VDC @ 8A -5VDC @ 2A -12VDC @ 4A
Cooling Fans	Four 45CFM Fans Filtered at 30ppi
Disk Drive Capacity	Four half-height 5.25" Drive Bays, Vibration Dampened
Keyboard Connector Locations	Front Panel - Behind Locking Front Access Door Rear Panel
Front Panel Indicators	Power On Indicator Power Supply Status LEDs Disk Activity LED Fan Status LED Overtemp. Indicating LED
Front Panel Controls	Power On/Off System Reset
Rear Panel Controls (Split Backplane Models ONLY)	System Reset Switch Separate Switch for Each Backplane Section Separate Keyboard Connector for each Backplane Section
Rear Panel Connectors	Keyboard Connector Knockouts for DB-9 and DB-25 Shell Connectors
Dimensions (W x H x D)	19.0 x 10.5 x 17.0in (483 x 267 x 432mm)
Weight	47 lbs (21.7kg)
Finish	Chassis - Gold Zinc Plated Front Panel - Painted, Gray
Paint Color	Cardinal Paint, #8103-44705, Gray, Medium texture, Water based

OPERATING ENVIRONMENT

Temperature	0 to +50°C
Humidity	8% to 80% RHNC
Altitude	-300 to 20,000ft
Vibration	1.5G, 3 Axis Vibration
Shock	10G, 3 Axis Shock

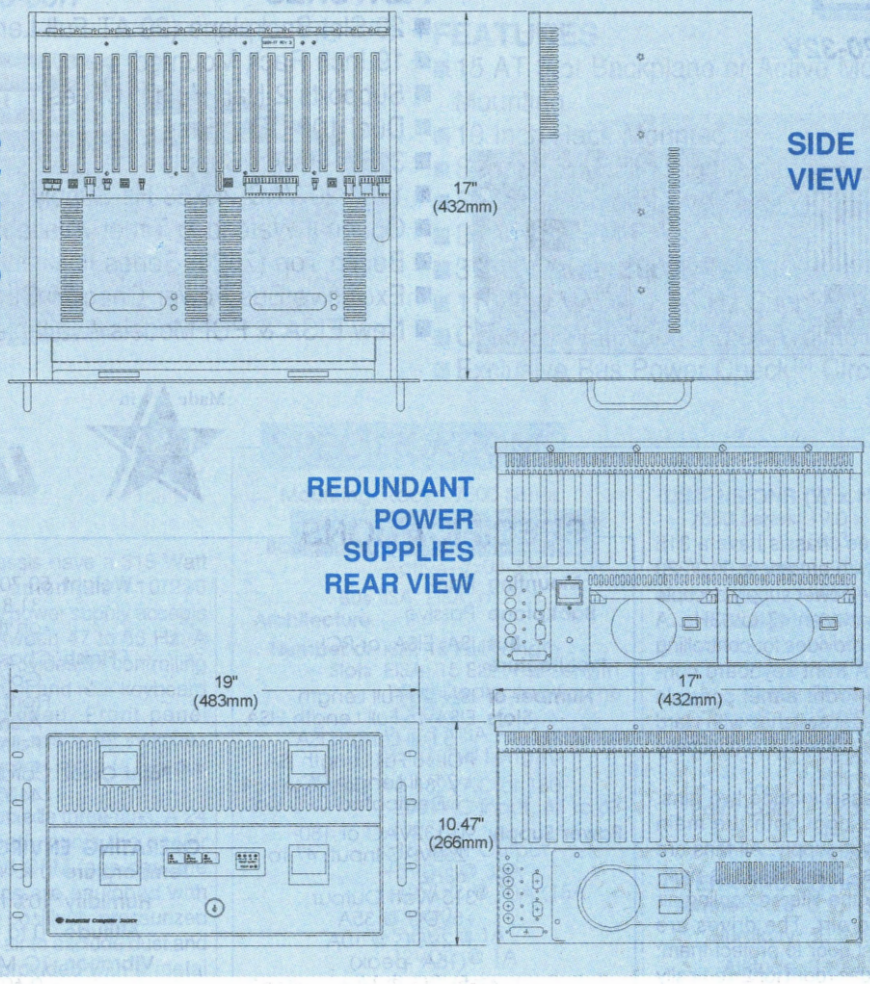
STORAGE ENVIRONMENT

Temperature	-40 to 70°C
Humidity	5 to 95% RHNC
Altitude	-300 to +50,000ft
Vibration	1.5G, 3 Axis Vibration
Shock	10G, 3 Axis Shock
MTBF	> 100,000 P.O.H. @ 30°C (AC Power Supply)
Agency Approvals	UL Recognized (AC Power Models) FCC Class A Tested Built to Meet Requirements of CSA and TUV

Call For Your Custom/Special Requirements

20 Slot Rack Mount Chassis
with High Drive Capacity (cont.)

Dimensional Outlines



ORDERING GUIDE

Model 7520-34H . . . . . $ 1995.00
20 Slot Chassis, 300W, AC Input Power

Model 7520-34H-DC48 $ 2995.00
20 Slot Chassis, 350W, DC Input Power

Model 7520E-34H . . . . . $ 2475.00
15 EISA, 5 ISA Slot Backplane, 300W, AC Input Power

Model 7520P-34H . . . . . $ 2445.00
16 ISA, 2 PCI Slot Backplane, 300W, AC Input Power

SPLIT BACKPLANE MODELS

Model 7522-34H . . . . . $ 2295.00
All features of basic chassis with ISA back-plane split into 2 sections of 10 slots each.

Model 7524-34H . . . . . $ 2295.00
All features of basic chassis with ISA backplane split into 4 sections of 5 slots each.

REDUNDANT POWER SUPPLY MODELS

Model 7520-34HR . . . . . $ 2995.00
20 Slot Chassis, 300W, AC Input Power, Redundant Power Supplies

Model 7520E-34HR . . . . $ 3475.00
15 EISA, 5 ISA Slot Backplane, 300W, AC Input Power, Redundant Power Supplies

Model 7520P-34HR . . . . $ 3445.00
16 ISA, 2 PCI Slot Backplane, 300W, AC Input Power, Redundant Power Supplies

Model 4-700062-0 . . . . $ 199.00
Spare Module for Model 752x-34HR Series Chassis & Redundant Supplies.

SPLIT BACKPLANES/ REDUNDANT POWER SUPPLY MODELS

Model 7522-34HR . . . . . $ 3295.00
20 Slot ISA Backplane split into 2 sections of 10 slots each. Individual Keyboard & Reset Connections. 300W Redundant Power Supply

Model 7524-34HR . . . . . $ 3295.00
20 Slot ISA Backplane split into 4 sections of 5 slots each. Individual Keyboard & Reset Connections. 300W Redundant Power Supply

ACCESSORIES

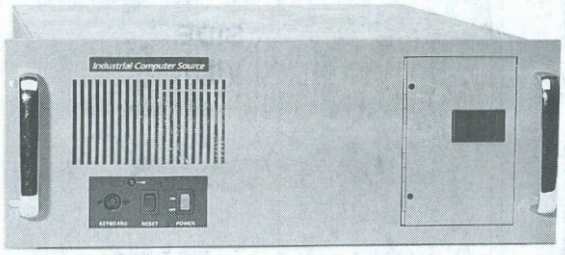
Model 7500-RMK . . . . . $ 75.00
Slide Rails for 19" Rack, 24" to 30" Deep

Model 7500-RMK18 . . . $ 75.00
Slide Rails for 19" Rack, 18" to 24" Deep

20 Slot Rack Mount Chassis

NEW EISA & ISA/ PCI Models

Model 7520-32V



FEATURES

- 20 Slot Backplane (20 AT Full Length Slots)
- 19 Inch Rack Mounted
- Supports 2 Half Height Drives
- Dual 106 CFM Fans
- 315W Power Supply
- 110/220 VAC, 47-63 Hz Supply
- Optional Watchdog Timer Available
- Bench Top (7620) Series
- Exclusive Bus Power Check™ Circuitry
- New EISA & PCI Models Available

Made in USA

The 7520-32V Series chassis have a 315 Watt power supply with automatic 110/220 voltage selection. The power supply accepts input frequencies between 47 to 63Hz. A fused AC receptacle provides for controlling other accessories. A front keyboard connector is provided. Front panel controls include power and reset switches with Hard Disk and power lights (a keylock is optionally available).

All 7520-32V chassis include two fans. Two 106 CFM fans cool both the main chassis and the power supply. All fans are equipped with filters. The chassis is positively pressurized by the filtered cooling air to exclude dust and dirt. The drives are provided with a metal door to protect them. The drive cage provides room for 2 vertically mounted half-height drives.

The 20-slot backplane is of 6 layer construction with provisions for terminating resistors on all lines. The backplane has demonstrated compatibility with the fastest 386/486 systems. LED's on all voltages give a visual indication of power supply operation.

A System Control Board provides CPU interface and a speaker amplifier.

SPECIFICATIONS

Mounting	Rack
Backplane	Passive
Bus Architecture	ISA, EISA, or PCI
Number of Slots	ISA- 20 Full Length EISA-15 Full Length EISA 5 Full Length ISA PCI-16 Full Length ISA 2 Full Length PCI 1 Dedicated CPU Slot
Power Supply	90-132VAC or 180-260VAC Input, 47 to 63Hz 315 Watt Output +5VDC @ 35A +12VDC @ 10A (15A peak) -5VDC @ 1A -12VDC @ 1A
Cooling Fans	Two 106CFM Fans Filtered at 60ppi
Disk Drive Capacity	Two half-height 5.25" Drive Bays, Standard Mount
Keyboard Connector Locations	Front Panel
Front Panel Indicators	Power On LED
Front Panel Controls	Power On/Off System Reset
Dimensions (W x H x D)	19.0 x 7.0 x 23in (483 x 178 x 584mm) 17.0in (432mm) Behind Front Panel
Weight	50-70 pounds (22.72 - 31.81kg.) depending on the configuration
Finish	Chassis- .055in Steel, Gold Zinc Plated Front panel- .125 Aluminum Plate, Painted.
Paint Color	Cardinal Paint, #8103-44705, Gray Medium texture, Water based

OPERATING ENVIRONMENT

Temperature	0 to +50°C
Humidity	10% to 90% RHNC
Altitude	0 to +10,000ft
Vibration	1G Max 60-500 cycles, 0-60 cycles operating
Shock	10G, 3 Axis Shock

STORAGE ENVIRONMENT

Temperature	-5 to +75°C
Humidity	5 to 95% RHNC
Altitude	-300 to +50,000ft
Vibration	1G Max 60-500 cycles, 0-60 cycles operating
Shock	10G, 3 Axis Shock
MTBF	> 100,000 P.O.H. @ 30°C.

ORDERING GUIDE

Model 7520-32V . . . . . $ 1849.00
19" Rack mount, 315W power supply, 20-slot passive backplane, up to 2 half height vertically mounted drives.

Model 7520E-32V . . . . . $ 2339.00
Same as above, with 15 EISA, 5 ISA Slot Backplane

Model 7520P-32V . . . . . $ 2299.00
Same as above with 16 ISA, 2 PCI Slot Backplane

Model 7620-32V . . . . . $ 1849.00
20 slot Bench Top chassis

ACCESSORIES

Model 7500-RMK . . . . . $ 75.00
Fits 24-30" Cabinets

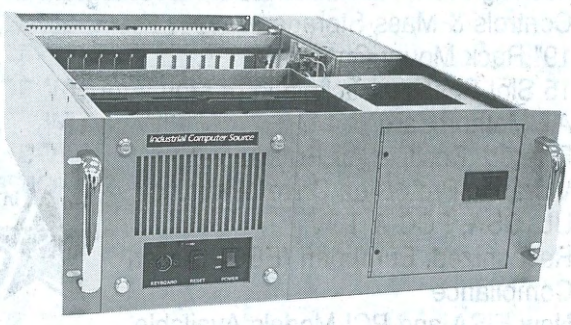
Meets FCC Part 15, Class A Emission Limits Special backplanes and colors available on request. Consult factory for price and availability.

Call For Your Custom/Special Requirements

15 Slot, 24" Deep Rack Mount Chassis

NEW EISA & ISA/ PCI Models

Model 7515-33H



FEATURES

- 15 AT Slot Backplane or Active Motherboard Mounting
- 19 Inch Rack Mounted
- Supports 3 Half Height Drives
- Shock Mounted Drive Cage
- Dual 106CFM Fans
- 315W Power Supply
- 110/220 VAC, 47-63 Hz Supply
- Optional Watchdog Timer Available
- Exclusive Bus Power Check™ Circuitry

Made in USA

The 7500 series chassis have a 315 Watt power supply with automatic 110/220 voltage selection. The power supply accepts input frequencies between 47 to 63 Hz. A fused AC receptacle provides for controlling other accessories. Front and rear keyboard connectors are provided. Front panel controls include power and reset switches with Hard Disk and power lights (a keylock is optionally available).

All 7500 chassis include three fans. A 24 CFM fan independently cools the power supply while two 106 CFM fans cool the main chassis. All fans are equipped with filters. The chassis is positively pressurized by the filtered cooling air to exclude dust and dirt. The drives are provided with a metal door to protect them. The drive cage provides room for 3 half height drives and is shock mounted. The lid is provided with 1/4 turn fasteners for fast and easy access.

A card hold-down bracket assures cards stay seated in high shock and vibration applications.

SPECIFICATIONS

Mounting	Rack - 7500 Series Benchtop - 7600 Series
Backplane	Passive- 7x15-33H Active- 7x08-33H
Bus Architecture	ISA, EISA, or PCI
Number of Slots	ISA: 15 Full Length EISA: 15 EISA Full Length 1 Slot Dedicated for the CPU PCI: 11 ISA Full Length 2 PCI Full Length
Power Supply	90-132VAC or 180-260VAC Input, 47 to 63 Hz 315 Watt Output +5VDC @ 35A +12VDC @ 10A (15A peak) -5VDC @ 1A -12VDC @ 1A
Cooling Fans	Two 106CFM Fans Fitered at 60ppi One 24 CFM filtered fan for power supply
Disk Drive Capacity	Three half-height **OR** One half-height and One full-height, 5.25" Drive Bays, Rail Mounted
Keyboard Connector Locations	Front Panel
Front Panel Indicators	Power On LED
Front Panel Controls	Power On/Off System Reset

DIMENSIONS (W x H x D)

7500 Series	19.0 x 7.0 x 23.0in (483 x 178 x 584mm)
7600 Series	17.0 x 7.0 x 23.0in (432 x 178 x 584mm)
Weight	50-70 pounds (22.72 - 31.81 kg.) depending on the configuration
Finish	Chassis- .055in Steel, Gold Zinc Plated Front panel- .125in Aluminum Plate, Painted
Paint Color	Cardinal Paint, #8103-44705, Gray Medium texture, Water based

OPERATING ENVIRONMENT

Temperature	0 to +50°C
Humidity	10 to 90% RHNC
Altitude	0 to +10,000ft
Vibration	1G Max 60-500 cycles, 0-60 cycles operating

STORAGE ENVIRONMENT

Temperature	-5 to +75°C
Humidity	5 to 95% RHNC
Altitude	-300 to +50,000ft
Vibration	1G Max 60-500 cycles, 0-60 cycles operating
MTBF	>100,000 P.O.H. @ 30°C.

ORDERING GUIDE

***Model 7515-33H . . . . . $ 1889.00**
19" rack mount, 315W power supply, 15-slot passive backplane, up to 3 half height horizontal drives can be mounted.

***Model 7515E-33H . . . . . $ 2359.00**
Same as above with EISA backplane

***Model 7515P-33H . . . . . $ 2319.00**
Same as above with 11 ISA, 2 PCI Slot Backplane

***Model 7508-33H . . . . . $ 1599.00**
19" rack mount, 315W power supply, mounting for IBM PC/AT mother-board, up to 3 half height horizontal drives can be mounted.

***Model 7515-33H-01 . . . $ 1999.00**
7515 chassis with front keyswitch

***Model 7615-33H . . . . . $ 1899.00**
Includes 15 slot backplane, Benchtop

***Model 7608-33H . . . . . $ 1599.00**
Mounting for Motherboard, Benchtop

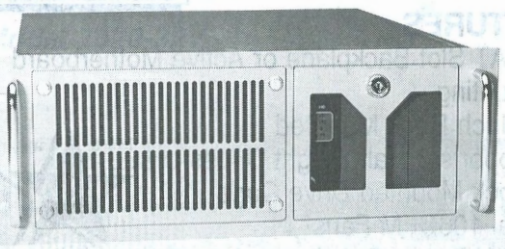
**** = UL Recognized Equipment***

Bench Top Version Available. Call for more information. Meets FCC Part 15, Class A Emission Limits. Special backplanes and colors available on request. Consult factory for price and availability.

15 Slot Rack Mount Chassis

NEW EISA & ISA/ PCI Models

Model 7415-23V



Bench Top Version Available (see page 37). DC Power Models Available for +12, +24, +48 or -48 VDC Mains!

FEATURES

- Locking Front Panel Access to 100% Secure Controls & Mass Storage
- 19" Rack Mount Chassis
- 15 Slot Passive Backplane or Mount for AT Motherboard
- Filtered, Positive Air Pressurization
- Vibration Protection Drive Mounting
- UL, CSA, FCC & TUV Recognized, European (EEC) Design Compliance
- New EISA and PCI Models Available

Made in USA

The 7415-23V and 7408-23V chassis provide similar features for passive backplane and motherboard systems respectively.

Both chassis are ruggedized for use in more harsh industrial or commercial environments where vibration and/or airborne contaminants present a hazard to standard office systems. Both chassis provide a 106CFM front mounted, filtered intake fan for pressurizing the inside of the chassis. An optional second 106CFM fan is available for more extreme environments. This pressurization prevents the airborne contaminants from entering the chassis and, in particular, from entering the area surrounding the floppy disk drives where normal office systems draw their air input. Drawing unfiltered air in through the drive area can cause dirt to enter the disk drive itself with the potential to damage or destroy your valuable data and programs.

INTERNAL FEATURES

The chassis provide for mounting of up to two half height or one full height 5.25" device in the front adjacent to a 3.5" device mounting bracket. There is an additional 3.5" internal mount for hard drives. The front panel mounted drives are protected from the outside environment and from unauthorized access by the locking front panel door. Fixed disk drive devices are provided with shock mounts for protection against industrial vibration.

An exclusive feature of these chassis is the speaker amplifier circuitry providing volume adjustment from nominal office level to a 500% gain for noisy areas where the system warning beeps and operator interface signals must be audible. For passive backplane systems, the 7415-23V chassis includes a fifteen slot, four-layer, low capacitance backplane incorporating all 16 bit AT slot connectors. A hold down bracket to secure the optional feature cards in position is provided to insure that cards remain firmly seated even under vibration.

Motherboard users will find mounting space for Baby and Full Size AT motherboards within the 7408-23V chassis. Keyboard connector provisions are made for the front panel as well as the rear panel access of the motherboard mounted connector. As with the 7415-23V, a feature card hold down bracket is provided.

SPECIFICATIONS

Mounting	Rack
Backplane	Passive- 7415X-23V Active- 7408-23V
Bus Architecture	ISA, EISA, or PCI
Number of Slots	ISA: 15 Full Length EISA: 15 EISA Full Length, 1 Slot Dedicated for the CPU PCI: 11 ISA Full Length, 2 PCI Full Length
Power Supply	90-135VAC or 180-265VAC Input, 50/60 Hz, Switch Selected 250W Output +5VDC @ 26A +12VDC @ 9A -5VDC @ 0.5A -12VDC @ 0.5A
Cooling Fans	One 106CFM Fan Filtered to 30ppi Room for an additional 106CFM Fan
Disk Drive Capacity	Front Access Two half-height 5¼" Drive Bays, Vibration Dampened One 3.5" Drive Bay, Standard Mount Internal One 3.5" Drive Bay, Vibration Dampened
Keyboard Connector Locations	Front Panel- Behind Locking Front Access Door Rear Panel
Front Panel Indicators	Power On LED Disk Activity LED Power Supply Status LEDs
Front Panel Controls	Power On/Off System Reset
Dimensions (W x H x D)	19.0 x 7.0 x 20.1in (483 x 178 x 510mm) 17.0in (432mm) Wide behind Front Panel
Weight	35-45lbs. (15.77-20.27kg)
Finish	Chassis- Gold Zink Plated Front Panel- Aluminum Plate, Painted
Paint Color	Cardinal Paint, #8103-44705, Gray Medium texture, Water based

OPERATING ENVIRONMENT

Temperature	0 to +55°C
Humidity	5 to 80% RHNC
Altitude	0 to +20,000ft
Vibration	1.5G, 3 Axis
Shock	10g, 3 Axis

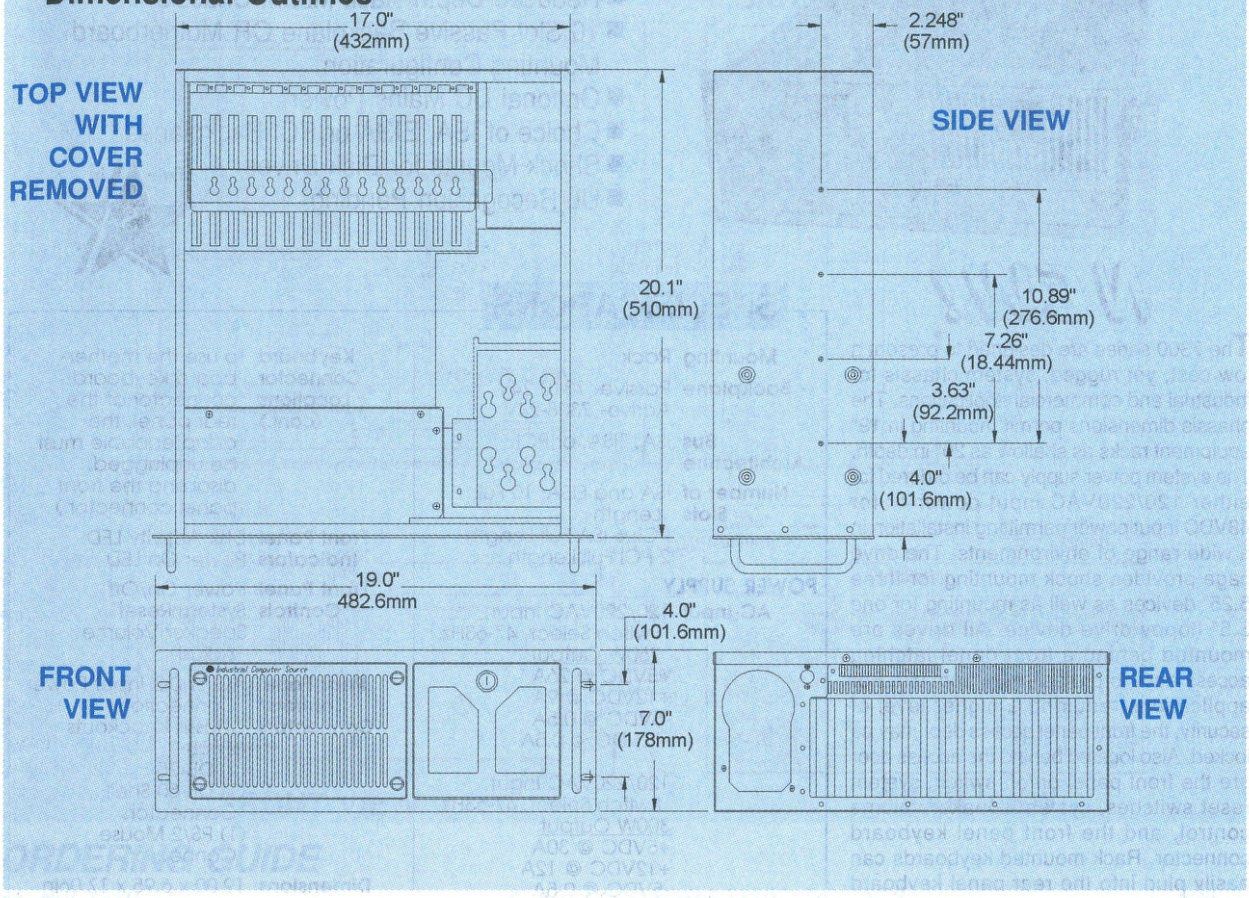
STORAGE ENVIRONMENT

Temperature	-40 to +70°C
Humidity	5 to 95% RHNC
Altitude	-300 to +50,000ft
Vibration	1.5G, 3 Axis
Shock	40G, 3 Axis
MTBF	>100,000 P.O.H. @ 30°C
Agency Approvals	UL, CSA, & TUV Complies with FCC Class A, Part 15

Call For Your Custom/Special Requirements

15 Slot Rack Mount Chassis (cont.)

Dimensional Outlines



ORDERING GUIDE

***Model 7415-23V . . . . . $ 1229.00**
Chassis, 250W power supply, 15 slot backplane

***Model 7415-33V . . . . . $ 1329.00**
Chassis, 300W power supply, 15 slot backplane

***Model 7415P-23V $1649.00**
Chassis, 250W power supply, 11 ISA, 2 PCI slot backplane

***Model 7415E-23V . . . . . $ 1689.00**
Chassis, 250W power supply, 15 slot EISA backplane

**** = UL Recognized Equipment***

***Model 7415P-33V . . . . . $ 1749.00**
Chassis, 300W power supply, 11 ISA, 2 PCI slot backplane

***Model 7415E-33V . . . . . $ 1789.00**
Chassis, 300W power supply, 15 slot EISA backplane

***Model 7415-23V-DC12 $ 1629.00**
12VDC in, 100W power supply

***Model 7415-23V-DC24 $ 1629.00**
24VDC in, 240W power supply

***Model 7415-23V-DC48 $ 1629.00**
+48VDC or -48VDC in, 300W supply

***Model 7408-23V . . . . . $ 1029.00**
Chassis, 250W power supply, mount location for motherboard CPUs.

***Model 7408-23V-DC12 $ 1429.00**
12VDC in, 100W power supply

***Model 7408-23V-DC24 $ 1429.00**
24VDC in, 240W power supply

***Model 7408-23V-DC48 $ 1429.00**
+48VDC or -48VDC in, 300W supply

***Model 7415-FAN . . . . . $ 65.00**
Optional 2nd 106CFM cooling fan

***Model 7500-RMK . . . . . $ 75.00**
Chassis slides for 24" to 30" cabinets

***Model 7500-RMK18 . . . $ 75.00**
Chassis slides for 18" to 24" cabinets

17" Deep 10-Slot Rack Mount Chassis

Model 7310-24V

FEATURES

- Reduced Depth Rack Mount Chassis
- 10 Slot Passive Backplane OR Motherboard Mounting Configuration
- Optional DC Mains Power
- Choice of ISA, EISA or PCI Backplanes
- Shock Mounts for Disk Drives
- UL Recognition Pending

Made in USA

NEW!

The 7300 series are designed to present a low cost, yet rugged, system chassis for industrial and commercial applications. The chassis dimensions permit mounting in 19" equipment racks as shallow as 20" in depth. The system power supply can be ordered for either 120/220VAC input power or for 48VDC input power permitting installation in a wide range of environments. The drive cage provides shock mounting for three 5.25" devices as well as mounting for one 3.5" floppy drive device. All drives are mounted behind a front panel latching access door to protect them from dirt. For applications requiring a higher level of security, the front panel access door may be locked. Also located behind the access door are the front panel on/off switch, system reset switches, system speaker volume control, and the front panel keyboard connector. Rack mounted keyboards can easily plug into the rear panel keyboard connector. Power On and Disk Activity LEDs are located on the front panel to the left of the disk drive door. Optional front panel fans add cooling for higher temperature environments by drawing additional air in through the front panel air filters. Up to two fans may be added by a one fan or a two fan optional module. The front panel also allows easy access to the air filter for cleaning or replacing.

BACKPLANES

A selection of backplane configurations is available including 10 slot ISA or EISA and 8 slot PCI models. For more detailed descriptions of the backplanes, refer to the backplanes section of this Source-Book. The chassis may also be ordered for mounting of standard Baby AT size motherboards. An internal interface board helps to easily adapt motherboards to the rack chassis components such as reset switch, disk activity LED, speaker connection and keyboard connectors. Adapter card restraint is provided for either passive backplane or motherboard systems by a fixture mounted to the chassis top cover. Both lateral and height adjustments are possible with this card retainer.

SPECIFICATIONS

Mounting Rack

Backplane Passive- 7310-24V
Active- 7308-24V

Bus Architecture ISA, EISA, or PCI

Number of Slots ISA and EISA: 10 Full Length
PCI: 6 ISA Full Length
2 PCI Full Length

POWER SUPPLY

AC Input 120/220VAC Input,
Switch Select, 47-63Hz.
250W Output
+5VDC @ 26A
+12VDC @ 9A
-5VDC @ 0.5A
-12VDC @ 0.5A

120/220VAC Input,
Switch Select, 47-63Hz.
300W Output
+5VDC @ 30A
+12VDC @ 12A
-5VDC @ 0.5A
-12VDC @ 0.5A

DC Input 24VDC/48VDC Input.
250W Output
+5VDC @ 25A
+12VDC @ 9A
-5VDC @ 0.5A
-12VDC @ 0.5A

Cooling Fans 24CFM Fan in Power Supply Module
Additional Capacity for One or Two Front Mounted DC Fan Assemblies @ 45cfm ea.

Disk Drive Capacity One 3.5" Drive Bay, Standard Mount
Three half-height 5.25" Drive Bays, Vibration Damped
All Mounted Vertical Behind Disk Access Door

Keyboard Connector Locations Front Panel - Behind Disk Access Door
Rear Panel
(Motherboard connector connects to chassis via an adapter cable to permit use at front panel.

Keyboard Connector Locations (cont.) To use the motherboard keyboard connector at the rear panel, the adapter cable must be unplugged, disabling the front panel connector.)

Front Panel Indicators Disk Activity LED
Power On LED

Front Panel Controls Power On/Off
System Reset
Speaker Volume Adjust

Rear Panel Controls/ Connectors AC or DC Input Power Connection
Chassis Knockouts
(2) DB-9
(2) DB-25
(1) DB-50 Shell Connectors
(1) PS/2 Mouse Connector

Dimensions (W x H x D) 19.00 x 6.95 x 17.06in (483 x 176 x 433mm)
17in (432 mm) Wide behind Front Panel

Weight 31.5lbs (14.31 kg)

Finish Chassis- Gold Zinc Plated
Front Panel- Painted, Gray

Paint Color Cardinal Paint, #8103-44705, Gray, Medium Texture, Water Based

OPERATING ENVIRONMENT

Temperature 0 to +50°C

Humidity 5 to 80% RHNC

Altitude -300 to +10,000ft

Vibration 1.5G, 3 Axis

Shock 10G, 3 Axis

STORAGE ENVIRONMENT

Temperature -40 to +70°C

Humidity 5 to 95% RHNC

Altitude -300 to +50,000ft

Vibration 1.5G, 3 Axis

Shock 10G, 3 Axis

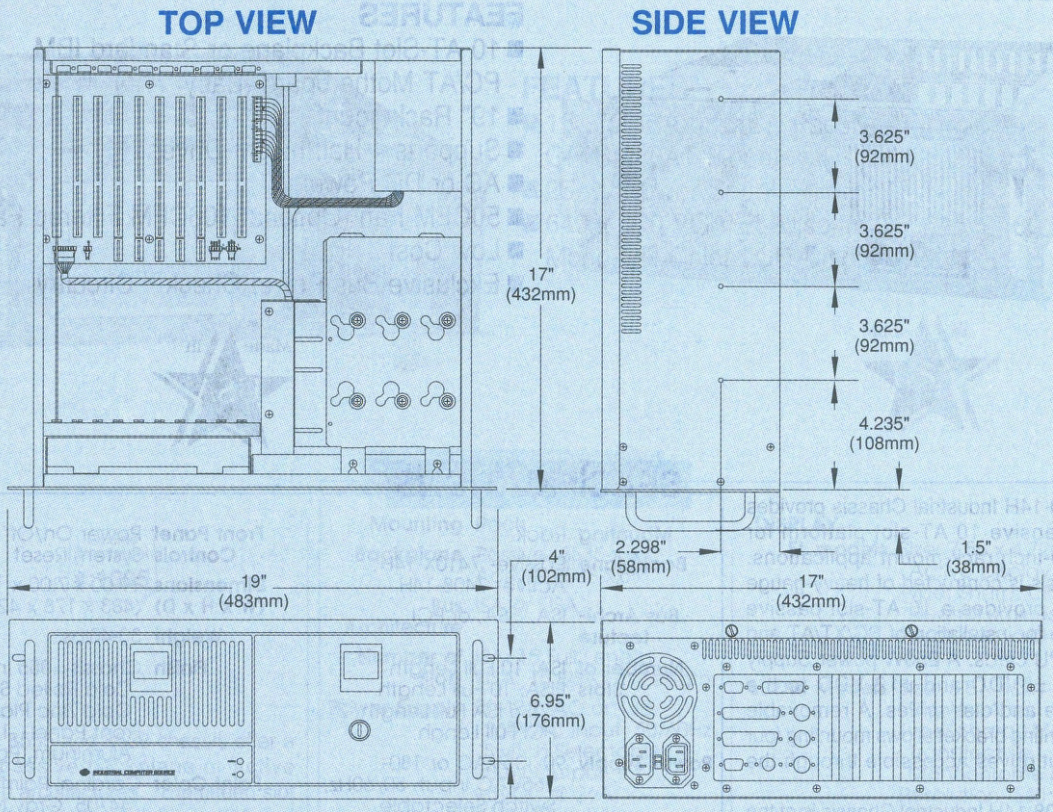
MTBF >100,000 P.O.H. @ 30°C

Agency Approvals UL Recognition Pending

Call For Your Custom/Special Requirements

17" Deep 10-Slot Rack Mount Chassis (cont.)

Dimensional Outlines



ORDERING GUIDE

Model 7310-24V ..... $ 899.00
System Chassis, 10 Slot ISA Backplane, 250W Supply

Model 7310-34V ..... $ 999.00
System Chassis, 10 Slot ISA Backplane, 300W Supply

Model 7310-24V-DC2 ..... $ 1299.00
System Chassis, 10 Slot ISA Backplane, 24VDC Input, 240W Supply

Model 7310-24V-DC4 ..... $ 1299.00
System Chassis, 10 Slot ISA Backplane, 48VDC Input, 300W Supply

Model 7310E-24V ..... $ 1219.00
System Chassis, 10 Slot EISA Backplane, 250W Supply

Model 7310E-34V ..... $ 1319.00
System Chassis, 10 Slot EISA Backplane, 300W Supply

Model 7310E-24V-DC2 ..... $ 1619.00
System Chassis, 10 Slot EISA Backplane, 24VDC Input, 240W Supply

Model 7310E-24V-DC4 ..... $ 1619.00
System Chassis, 10 Slot EISA Backplane, 48VDC Input, 300W Supply

Model 7310P-24V ..... $ 1259.00
System Chassis, 6 ISA/2 PCI Slot Backplane, 250W Supply

Model 7310P-34V ..... $ 1359.00
System Chassis, 6 ISA/2 PCI Slot Backplane, 300W Supply

Model 7310P-24V-DC2 ..... $ 1659.00
System Chassis, 6 ISA/2 PCI Slot Backplane, 24VDC Input, 240W Supply

Model 7310P-24V-DC4 ..... $ 1659.00
System Chassis, 6 ISA/2 PCI Slot Backplane, 48VDC Input, 300W Supply

Model 7308-24V ..... $ 699.00
System Chassis, Motherboard Mounting Kit, 250W Supply

Model 7308-34V ..... $ 799.00
System Chassis, Motherboard Mounting Kit, 300W Supply

Model 7308-24V-DC2 ..... $ 1099.00
System Chassis, Motherboard Mounting Kit, 24VDC Input, 240W Supply

Model 7308-24V-DC4 ..... $ 1099.00
System Chassis, Motherboard Mounting Kit, 48VDC Input, 300W Supply

ACCESSORIES

Model 7300-FAN ..... $ 79.00
Additional Cooling Fan Kit for 7300 Series Chassis, 45 cfm

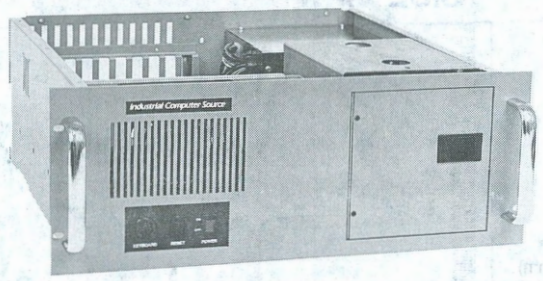
Model 7300-2FAN ..... $ 155.00
Two Additional Cooling Fans Kit for 7300 Series Chassis, 45 cfm each

Model 7500-RMK ..... $ 75.00
Rack Mount Slides for 24-30" Depth Cabinets

Model 7500-RMK18 ..... $ 75.00
Rack Mount Slides for 18-24" Depth Cabinets

10 Slot Rack Mount Chassis

Model 7410-14H



FEATURES

- 10 AT-Slot Backplane or Standard IBM PC/AT Motherboard (Baby "AT")
- 19" Rackmount
- Supports 4 Half-height Drives
- AC or DC Power
- 50CFM Fan (Optional 106CFM Filtered Fan)
- Low Cost
- Exclusive Bus Power Check™ Circuitry

Made in USA

The 7410-14H Industrial Chassis provides an inexpensive 10 AT-slot platform for RTMA 19-inch rack-mount applications. The chassis is contructed of heavy-gauge steel and provides a 10 AT-slot passive backplane for installation of PC/XT/AT and 80486 CPU cards. A 250W power Supply provides ±5VDC and ±12 VDC to the backplane and disk drives. A removable drive mounting bracket allows mounting four half-height drives accessible through the front door.

The 7408-14H Industrial Chassis is of the same construction as the 7410, but provides for installing an 8-slot XT or "baby AT" style active motherboard. The power supply provides a power-good signal for these backplanes.

Meets FCC Part 15, Class A Emission Limits (AC Power Modules Only) DC Power Models Available for +12, +24, +48 or -48 VDC Mains!

SPECIFICATIONS

Mounting	Rack
Backplane	Passive- 7410X-14H Active- 7408-14H
Bus Architecture	ISA, EISA, or PCI
Number of Slots	ISA: 10 Full Length EISA: 10 Full Length PCI: 6 ISA Full Length, 2 PCI Full Lengh
Power Supply	90-135VAC or 180-265VAC Input, 50/60Hz, Switch Selectable 250W Output +5VDC @ 26A +12VDC @ 9A -5VDC @ 0.5A -12VDC @ 0.5A
Cooling Fans	Cooling through power supply 106 CFM fan option available
Disk Drive Capacity	Four half-height **OR** One full-height and Two half-height, 5¼" Drive Bays, Standard Mount
Keyboard Connector Locations	Front Panel Rear Panel- 7408-14H
Front Panel Indicators	Power On Indicator
Front Panel Controls	Power On/Off System Reset
Dimensions (W x H x D)	19.00 x 7.00 x 16.62in (483 x 178 x 422mm)
Weight	30-40lbs.
Finish	Chassis- .055 inch Cold Rolled Steel, Gold Zinc Plated Front Panel- .125 inch Aluminum, Painted
Paint Color	Cardinal Paint, #8103-44705, Gray Medium texture, Water based

OPERATING ENVIRONMENT

Temperature	0 to +50°C
Humidity	5 to 80% RHNC
Altitude	-300 to +10,000ft
Vibration	1G Max 60-500 cycles

STORAGE ENVIRONMENT

Temperature	0 to +70°C
Humidity	5 to 95% RHNC
Altitude	-300 to +50,000ft
Vibration	1G Max 60-500 cycles
MTBF	>100,000 P.O.H. @ 30°C

ORDERING GUIDE

Model 7410-14H . . . . . $ 1055.00
Includes 10 slot backplane

Model 7410E-14H . . . . . $ 1375.00
Includes 10 slot EISA backplane

Model 7410P-14H . . . . . $ 1375.00
Includes 6 ISA & 2 PCI slot backplane

Model 7410-14H-DC12 $ 1455.00
12VDC in, 100W power supply

Model 7410-14H-DC24 $ 1455.00
24VDC in, 250W power supply

Model 7410-14H-DC48 $ 1455.00
+48VDC or -48VDC in, 250W supply

Model 7408-14H . . . . . $ 855.00
Mounting for motherboard

Model 7408-14H-DC12 $ 1255.00
12VDC in, 100W power supply

Model 7408-14H-DC24 $ 1255.00
24VDC in, 250W power supply

Model 7408-14H-DC48 $ 1255.00
+48VDC or -48VDC in, 250W supply

ACCESSORIES

Model 7515-FAN . . . . . $ 65.00
Optional fan

Model 7500-RMK . . . . . $ 75.00
Fits 24" to 30" cabinet depth

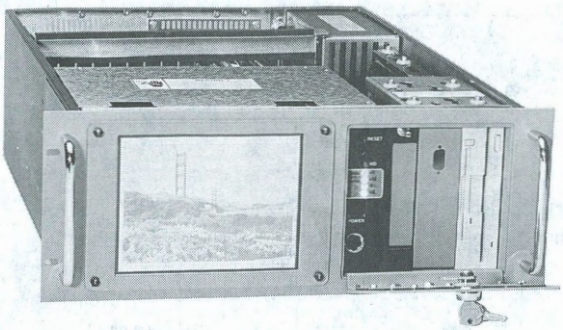
Model 7500-RMK18 . . . $ 75.00
Fits 18" to 24" cabinet depth

See page 37 for Bench Top Models

Call For Your Custom/Special Requirements

15 Slot Chassis with EL/LCD Display

Model 8535-LCDC



FEATURES

- 15 Slot ISA or EISA Passive Backplane OR Baby AT Mount
- 250W Power Supply
- 640 x 400 VGA EL Display OR 640 x 480 Mono OR Color LCD Display

Made in USA

Faxline Document #:1005

The Model 8535 and 8538 chassis offer a choice of passive backplane or active motherboard architectures. The fifteen slot passive backplane is available in ISA and EISA models. All expansion slots are full length, AT card locations. The 250W power supply is supplemented by a 24VDC supply for the EL Flat Panel display model and a backlight power supply in the LCD models. The display offers monochrome VGA resolution and compatibility to 640 x 400 lines with the EL or 640 x 480 with the monochrome or color LCD display. Mounting provisions are included for one 3.5" and two 5.25" devices with front panel access and for another 3.5" device which may be mounted internally. Filtered air is brought into the chassis by the 106CFM fan in the card cage area for pressurization against airborne particulates.

SPECIFICATIONS

Mounting Rack

Backplane Passive- 8535-xxxx
Active- 8538-xxxx

Bus Architecture ISA or EISA

Number of Slots ISA: 15 Full Length
EISA: 15 EISA Full Length

Power Supply 90-135VAC or 180-265VAC Input, 50/60Hz, Switch Selectable
250W Output
+5VDC @ 26A
+12VDC @ 9A
-5VDC @ 0.5A
-12VDC @ 0.5A
24Watts for EL Display Only
+24VDC @ 1A 6.5Watts for LCD Backlight Only
1300VDC @ 5mA

Cooling Fans One 106CFM Fan Filtered to 30ppi
24CFM Fan in Power Supply

DISK DRIVE CAPACITY

Front Access Two half-height 5.25" Drive Bays, Vibration Dampened
One 3.5" Drive Bay, Standard Mount

Internal One 3½" Drive Bay, Vibration Dampened

Keyboard Connector Locations Front Panel- Behind Locking Front Access Door
Rear Panel

Front Panel Indicators Disk Activity LED
Power Supply Status LEDs

Front Panel Controls Power On/Off
System Reset
Speaker Gain Adjustment

DISPLAY

EL models Size: 7.55 x 4.72in Active Display Area
Type: Sharp, LJ64ZU35, ElectroLuminescent
Resolution: 640 x 400 Max

LCDM Models Size: 5.8 x 4.3in Active Display Area
Type: Sharp LM64K101 Transflective Monochrome LCD.
Resolution: 640 x 480 x 16 gray shade resolution.

LCDC Models Size: 6.77 x 5.12in Active Display Area
Type: Sanyo LCM5326-22NTK Color LCD Display
Resolution: 640 x 480 VGA Compatible.

Dimensions (W x H x D) 19.00 x 6.96 x 23.00in (483 x 177 x 584mm)

Weight 37.5 to 47.5lbs
17 to 21.6KG

Finish Chassis- 0.055" gold zinc plated steel
Front panel - 0.125" Aluminum, Painted

Paint Color Cardinal Paint, #8103-44705, Gray Medium texture, Water based

OPERATING ENVIRONMENT

Temperature +10 to +45°C

Humidity 5 to 85% RHNC

Altitude 0 to +10,000ft

Vibration 1.5G, 3 Axis

Shock 10G, 3 Axis

STORAGE ENVIRONMENT

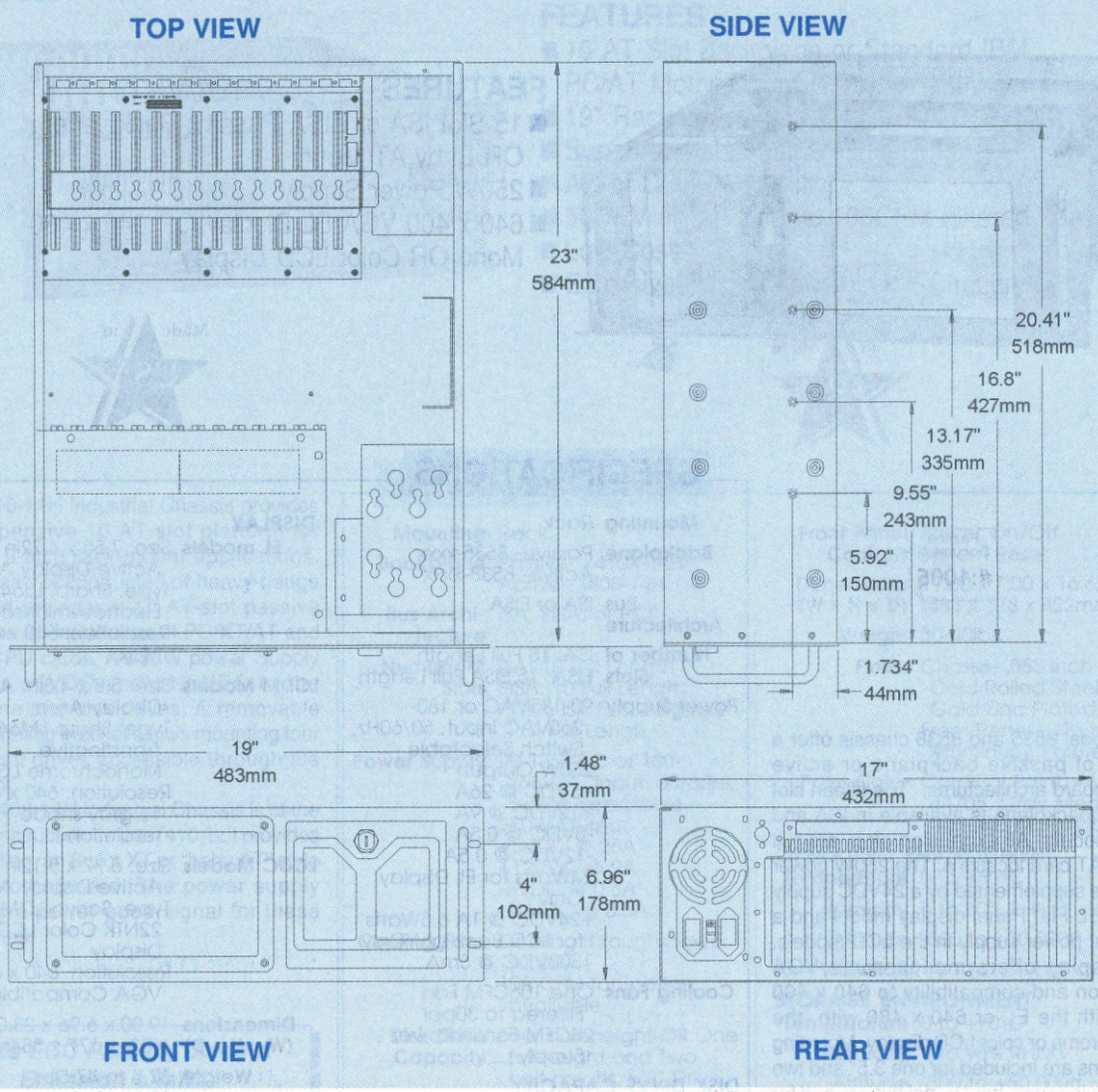
Temperature -20 to +65°C

Humidity 5 to 90% RHNC

MTBF Chassis/Power Supply - >100,000 POH @ 30°C

15 Slot Chassis with EL/LCD Display (cont.)

Dimensional Outlines



ORDERING GUIDE

Model 8535-EL $3095.00
15 Slot Chassis, 250W Supply, Mono EL Display

Model 8535-LCDC $3495.00
15 Slot Chassis, 250W Supply, LCD Display

Model 8535-LCDM $2595.00
15 Slot Chassis, 250W Supply, Mono LCD Display

Model 8538-EL $2895.00
Baby AT Chassis, 250W Supply, Mono EL Display

Model 8538-LCDC $3295.00
Baby AT Chassis, 250W Supply, LCD Display

Model 8538-LCDM $2395.00
Baby AT Chassis, 250W Supply, Mono LCD Display

Model 8535E-EL $3545.00
15 Slot EISA Chassis, 250W Supply, Mono EL Display

Model 8535E-LCDC $3955.00
15 Slot EISA Chassis, 250W Supply, LCD Display

Model 8535E-LCDM $2845.00
15 Slot EISA Chassis, 250W Supply, Mono LCD Display

FLAT PANEL CONTROLLERS (NOT INCLUDED IN BASIC MODELS. SEE PAGE 73)

Model FMC30-LM64K101 ..... $ 389.00
Flat Panel Controller for Mono LCD Display

Model FME25-LJ64ZU35 ..... $ 389.00
Flat Panel Controller for Sharp EL Display

Model FSC30-LCM532622 ..... $ 389.00
Flat Panel Controller for Sanyo STN Color LCD Display

ACCESSORIES

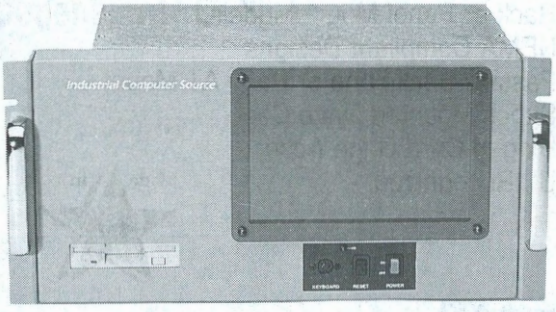
Model 7415-FAN ..... $ 65.00
Optional 2nd 106CFM Cooling Fan

Model 7500-RMK ..... $ 75.00
Chassis Slides for 24" to 30"D Cabinets

Call For Your Custom/Special Requirements

8 Slot Chassis with EL Display

Model 8308A-EL



FEATURES

- Rack Mount, Panel Mount, Bench Top
- 8 Slot Chassis
- Built-in Monochrome EL Display
- Mount for 3.5" Floppy Drive
- Internal Mount for 3.5" Fixed Disk Drive
- Exclusive Bus Power Check™ Circuitry

Made in USA

The 8300A series chassis provide versatility in mounting for PC AT-Bus applications. The chassis can be mounted in a rack, in a panel, or on a bench top.

The built-in Electro-Luminescent display and a required video adapter provide full monochrome resolution at up to 640 x 400 pel with a 16 level gray scale. The display is protected by a Lexan screen over the front panel to prevent scratching and reduce glare.

Mounting provisions are made for installing a standard 3.5" micro floppy drive with front panel access. Additionally, room and mounting provisions are provided for internally mounting a 3.5" fixed disk drive. The front panel controls include the keyboard connector, power on/off switch, hard disk access LED indicator and the CPU reset switch.

Internally, the option cards are mounted transversely to maximize use of the chassis size. The 100W power supply module is mounted in the lower section of the chassis and provides ample power for fully loaded systems.

The power supply includes automatic power source selection circuitry to permit use on either 110VAC or 220VAC. An internal 106CFM fan assembly assures that the card cage area is ventilated and cooled to protect your system from ambient operating conditions.

SPECIFICATIONS

Mounting	Rack Panel Desktop
Backplane	Passive
Bus Architecture	ISA
Number of Slots	8 Full Length
Power Supply	108-132VAC **OR** 198-242VAC Input, 47-63Hz, Auto selected 100W Output +5VDC @ 10A +12VDC @ 5A -5VDC @ 1A -12VDC @ 1A
Cooling Fans	One 106CFM Fan Filtered at 60ppi

DISK DRIVE CAPACITY

Front Access	One 3½" Drive Bay, Standard Mount
Internal	One 3½" Drive Bay, Standard Mount
Keyboard Connector Locations	Front Panel
Front Panel Indicators	Power On Disk Activity
Front Panel Controls	Power On/Off System Reset

DISPLAY

Size	7.55" x 4.72" (192 x 120 mm)
Type	Flat Panel, ElectroLuminescent
Resolution	640 x 400 Max
Dimensions (W x H x D)	17.00 x 8.75 x 11.10in (432 x 222 x 282mm)
Finish	Chassis- 0.055" Steel Gold Zinc Plated Front Panel- .125" Aluminum, Painted
Paint Color	Cardinal Paint, #8103-44705, Gray Medium texture, Water based

OPERATING ENVIRONMENT

Temperature	0 to +50°C
Humidity	5 to 95% RHNC
Altitude	0 to +10,000ft

STORAGE ENVIRONMENT

Temperature	-40 to 80°C
Humidity	5 to 95% RHNC
MTBF	>100,000 P.O.H. @ 30°C

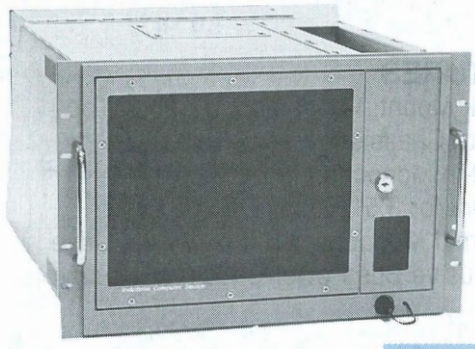
ORDERING GUIDE

Model 8308A-EL ..... ***$ 3095.00***
8 Slot Chassis and Display

REQUIRED CONTROLLER
Model FME25-LJ64ZU35 ..... ***$ 389.00***
Sharp EL Flat Panel Controller

8540 Rack or Panel Mount Chassis
with 14" Super VGA Monitor

Model 8540-RV



FEATURES

- Built-In 14"/13"V SVGA Monitor
- Rack or Panel Mount Models
- NEMA Compliant Designs
- Passive Backplane or Baby AT Mount
- Shock Mounted Drive Cage
- Hinged Card Cage Access
- UL Recognized

Made in USA

The 8540-RV has been designed to incorporate many features asked for by users of our earlier 8531 and 8533 model chassis. The monitor is a 14" CRT with a 13" diagonal viewing area. The backplane model has 10 full length slots for mounting of CPU cards and feature cards. The chassis is also available in a model to mount Baby AT motherboards such as the P1 models described earlier in this Source-Book.

The front panel has been designed to make it NEMA1 in the rack mount model and NEMA12 in the panel mount model. The system controls, such as the keyboard connector, reset button, On/Off switch, etc., are lockable for security via the front panel door.

The card cage area is mounted to the rear of the CRT cage and hinged for easy access either from the front or rear of the unit. For service from the front, the chassis may be extended fully forward from the cabinet on the included slide rails to gain access to the card cage. (To utilize this feature, it is recommended that the cabinet be firmly secured to the floor to avoid the cabinet tipping over with the 8540 fully withdrawn from the cabinet.)

SPECIFICATIONS

MOUNTING

Rack Mount- 8540-RV	≥ 24"D RETMA Cabinet NEMA1 at Front Panel
Panel Mount - 8640-RV	NEMA12 at Front Panel
Backplane	Passive- 8x40x-RV-10 Active- 8x40-RV-8MB
Bus Architecture	ISA, EISA, or PCI
Number of Slots	ISA: 10 Full Length EISA: 10 Full Length PCI-: 6 ISA Full Length, 2 PCI Full Length
Power Supply	90-135VAC or 180-265VAC Input, 50/60Hz, Switch Selectable 250W Output +5VDC @ 26A +12VDC @ 9A -5VDC @ 0.5A -12VDC @ 0.5A
Cooling Fans	Two 45CFM Fans Filtered at 60ppi 24CFM Fan in Power Supply

DISK DRIVE CAPACITY

Front Access	One 5.25" Drive Bay, Standard Mount One 3.5" Drive Bay, Standard Mount
Internal	One 3.5" Drive Bay, Vibration Dampened
Keyboard Connector Locations	Front Panel
Front Panel Indicators	Disk Activity LED Overtemp LED Fan Status LED Power Supply Status LEDs
Front Panel Controls	Power On/Off System Reset Monitor Power On/Off Contrast Brightness All Front Panel Controls Located Behind Front Locking Access Door
Top Panel Access Controls	Vertical Size/Position/Hold Horizontal Phase/Width Rotary Switch Color Selection Text Switch TTL/Analog Switch
Rear Panel Connectors	Knockouts for: Two DB-9 or DB-15 Three DB-25 DIN Keyboard Connector
Display	Size: 13" Diagonal Type: CRT, SVGA Compatible Resolution: 800 x 600 (NI) Max
Dimensions (W x H x D)	8540-RV-xxx 19.0 x 12.2 x 24.0in (483 x 310 x 610mm) 8640-RV-xxx 19.3 x 14.5 x 24.0in (490 x 368 x 610mm)
Weight	8540-RV-xxx 92.5lbs. (42.0kg) 8640-RV-xxx 89.3lbs (40.6kg.)
Paint Color	Cardinal Paint, #8103-44705, Gray Medium texture, Water based
Finish	Chassis- Gold Zinc Plated Steel Front panel- Aluminum, Painted

OPERATING ENVIRONMENT

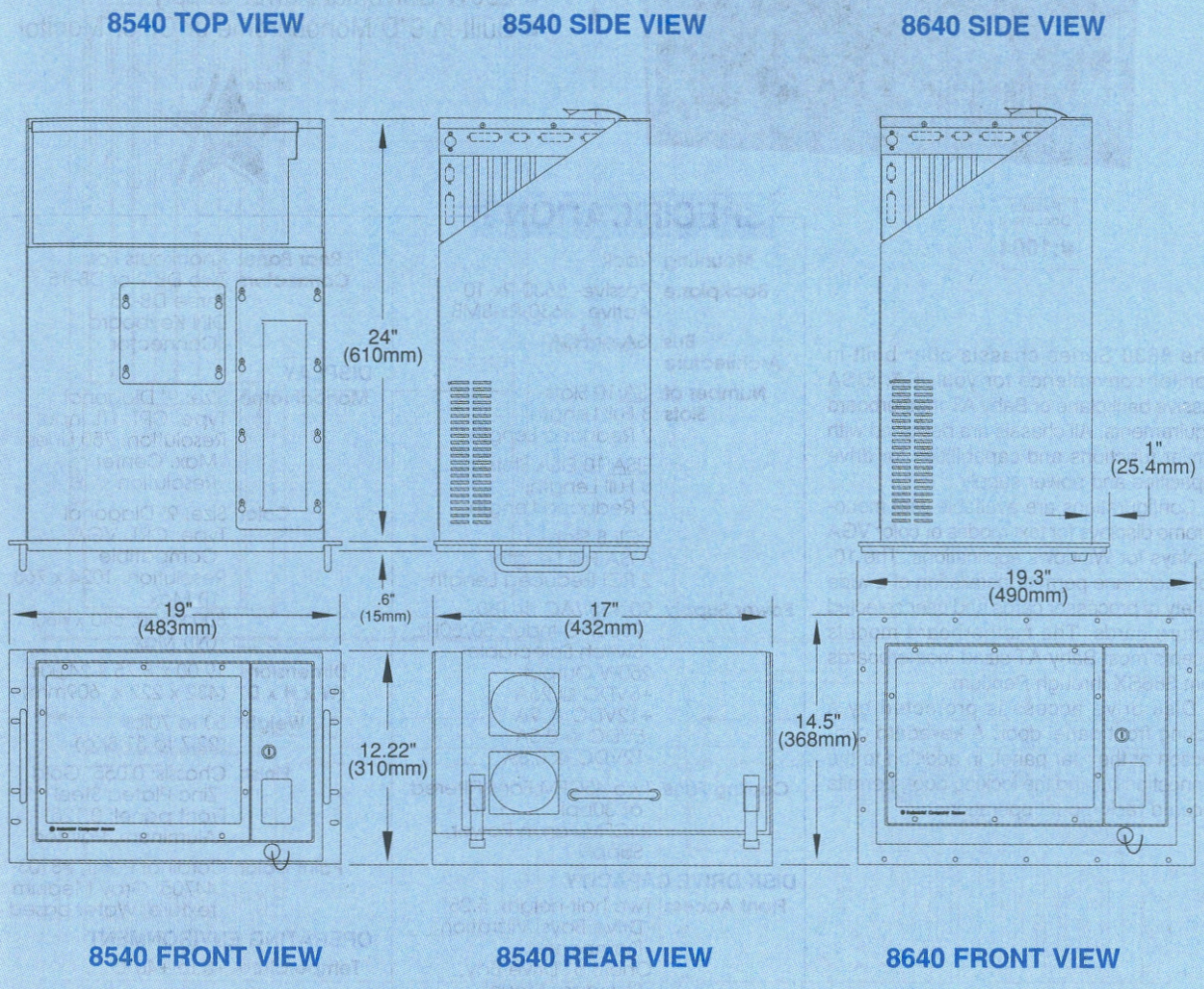
Temperature	+5 to +40°C
Humidity	10 to 85% RHNC
Altitude	0 to +10,000ft

STORAGE ENVIRONMENT

Temperature	-20 to +65°C
Humidity	5 to 90% RHNC
MTBF	>50,000 P.O.H. - Monitor >100,000 P.O.H. - Power Supply
Agency Approvals	UL recognized, CSA Complies with FCC, Class A requirements

Call For Your Custom/Special Requirements

Dimensional Outlines



ORDERING GUIDE

Model 8540-RV-10 . . . . $4495.00
Chassis, Backplane, Rack Slides, Monitor

Model 8540E-RV-10 . . . $4815.00
Chassis, EISA Backplane, Rack Slides, Monitor

Model 8540P-RV-10 . . . $4855.00
Chassis, 6 ISA, 2 PCI Backplane, Rack Slides, Monitor

Model 8540-RV-8MB . . $4395.00
Chassis, Mounting Hardware for Motherboard, Rack Slides, Monitor

Model 8640-RV-10 . . . . $4695.00
NEMA12 Chassis, Backplane, Monitor

Model 8640-RV-8MB . . $4595.00
NEMA12 Chassis, Mounting Hardware for Motherboard, Monitor

8630 Rack Mounted Chassis
with 9" Monitor

EXPRESS SOURCE-BOOK FAXLINE
FAX
1-800-677-7329
Receive a detailed FAX within Minutes!

Model 8630-RV-10

Faxline Document #:1004

FEATURES

- 10 Slot ISA or EISA Passive Backplane or Baby AT Mounting
- 250W Universal Power Supply
- Built-in 9"D Monochrome or Color Monitor

Made in USA

The 8630 Series chassis offer built-in monitor convenience for your ISA, EISA passive backplane or Baby AT motherboard requirements. All chassis are designed with similar functions and capabilities for drive capacities and power supply.

Configurations are available with monochrome displays for text modes or color VGA displays for Windows applications. The 10-slot backplane permits installation of a wide variety of processor cards and user selected feature cards. The motherboard models accepts most Baby-AT sized motherboards from 386SX through Pentium.

Disk drive access is protected by a locking front panel door. A keyboard connection at the rear panel, in addition to the connection behind the locking door, permits secured rack mount operations.

SPECIFICATIONS

Mounting	Rack
Backplane	Passive- 8630-Rx-10 Active- 8630-Rx-8MB
Bus Architecture	ISA or EISA
Number of Slots	ISA: 10 Slots- 8 Full Length 2 Reduced Length EISA: 10 EISA Slots- 8 Full Length 2 Reduced Length PCI: 8 Slots- 6 ISA Full Length 2 PCI Reduced Length
Power Supply	90-135VAC or 180-265VAC Input, 50/60Hz, Switch Selectable 250W Output +5VDC @ 26A +12VDC @ 9A -5VDC @ 0.5A -12VDC @ 0.5A
Cooling Fans	Two 45CFM Fans Filtered at 30ppi 24CFM Fan in Power Supply

DISK DRIVE CAPACITY

Front Access	Two half-height, 5.25" Drive Bays, Vibration Dampened One 3.5" Drive Bay, Standard Mount Located Behind Locking Access Door
Internal	One 3.5" Drive Bay, Vibration Dampened
Keyboard Connector Locations	Front Panel- Behind Locking Access Door Rear Panel
Front Panel Indicators	Disk Activity LED Overtemp LED Fan Status LED Power Supply Status LEDs
Front Panel Controls	Power On/Off System Reset Monitor: Power On/Off Color Monitor: Contrast Brightness All Front Panel Controls Located Behind Front Locking Access Door
Rear Panel Connectors	Knockouts For: Two DB-9 or DB-15 Three DB-25 DIN Keyboard Connector

DISPLAY

Monochrome	Size: 9" Diagonal Type: CRT, TTL Input Resolution: 750 Lines Max. Center Resolution
Color	Size: 9" Diagonal Type: CRT, VGA Compatible Resolution: 1024 x 768 (I) Max 800 x 600, 640 x 480 (NI) Max
Dimensions (W x H x D)	19.00 x 8.75 x 24.00in (432 x 222 x 609mm)
Weight	50 to 70lbs (22.7 to 31.8Kg)
Finish	Chassis: 0.055" Gold Zinc Plated Steel Front panel: 0.125" Aluminum, Painted
Paint Color	Cardinal Paint, #8103-44705, Gray Medium texture, Water based

OPERATING ENVIRONMENT

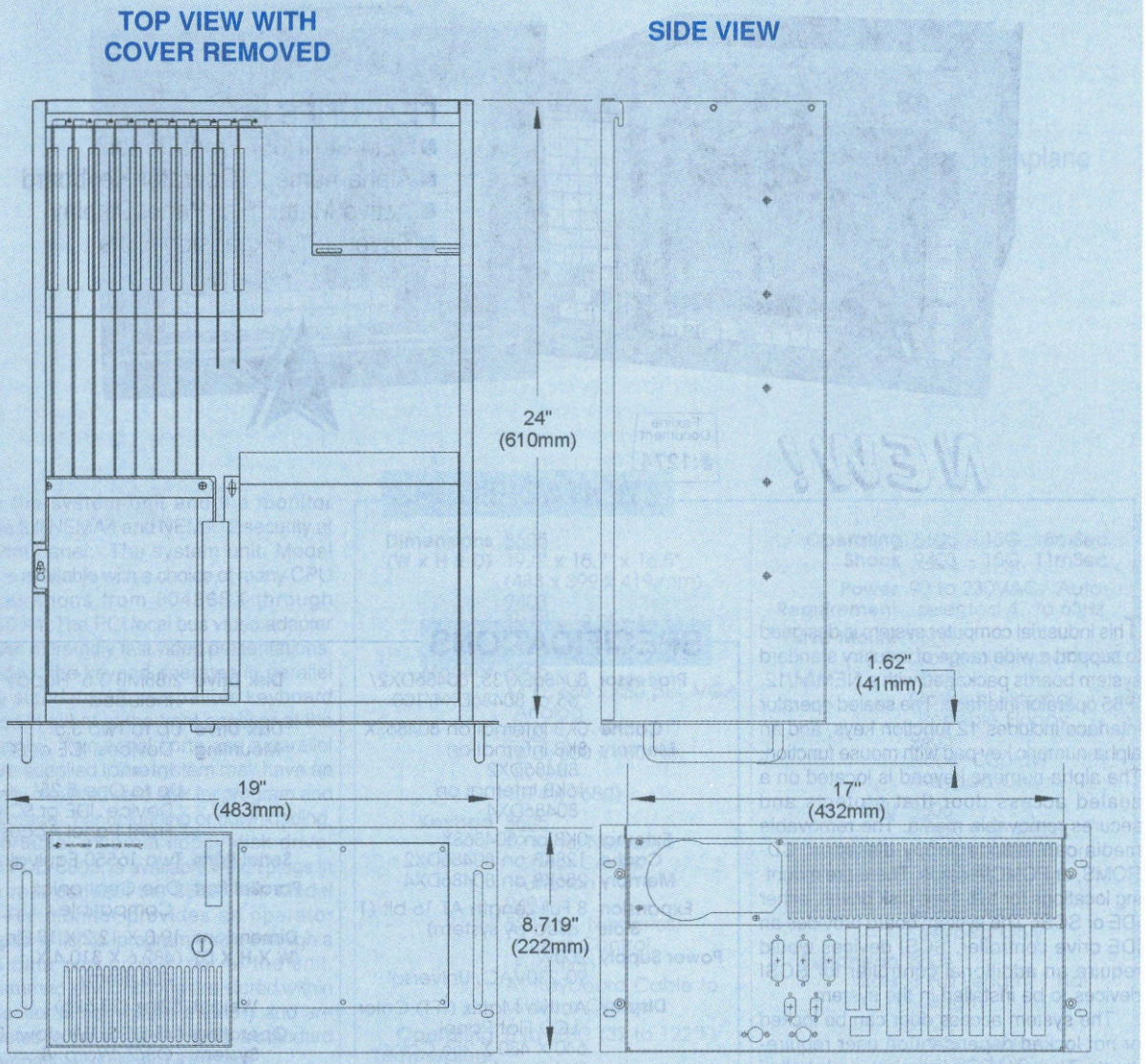
Temperature	+5 to +40°C
Humidity	5 to 80% RHNC
Altitude	0 to +10,000ft
Vibration	1.0G, 3 Axis, 60-50 Cycles

STORAGE ENVIRONMENT

Temperature	-20 to +65°C
Humidity	5 to 90%, RHNC
MTBF	Chassis/Power Supply/Monitor - >50,000 P.O.H. @ 30°C

Call For Your Custom/Special Requirements

Dimensional Outlines



ORDERING GUIDE

Model 8630-RM-10 . . . . $2695.00
10 Slot ISA Backplane, 9" Monochrome Monitor

Model 8630E-RM-10 . . . $3015.00
10 Slot EISA Backplane, 9" Monochrome Monitor

Model 8630P-RM-10 . . . $3055.00
6 Slot ISA, 2 Slot PCI Backplane, 9" Monochrome Monitor

Model 8630-RM-8MB . . $2495.00
Baby AT Mounting, 9" Monochrome Monitor

Model 8630-RV-10 . . . . $3695.00
10 Slot ISA Backplane, 9" Color VGA Monitor

Model 8630E-RV-10 . . . $4015.00
10 Slot EISA Backplane, 9" Color VGA Monitor

Model 8630P-RV-10 . . . $4015.00
6 Slot ISA, 2 Slot PCI Backplane, 9" Color VGA Monitor

Model 8630-RV-8MB . . $3495.00
Baby AT Mounting, 9" Color VGA Monitor

ACCESSORY

Model 7500-RMK . . . . . $ 75.00
Rack Mounting Slides for 24" to 30" Depth Cabinet

See pages 72-74 for Video Adapter Cards

Flat Panel Display NEMA4
(IP65) Panel Mount Workstation

EXPRESS SOURCE-BOOK FAXLINE
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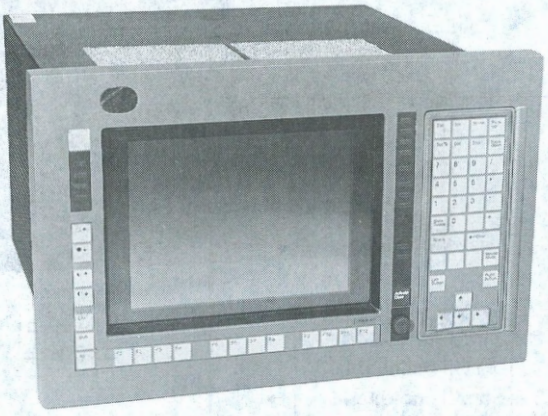
Receive a detailed FAX within Minutes!
FAX

Model 8609



NEW!

Faxline Document #:1274

FEATURES

- NEMA4 (IP65) Front Panel
- Alpha-numeric Operator Keyboard
- Active Matrix Flat Panel Display
- Seven ISA Expansion Slots

Made in USA

This industrial computer system is designed to support a wide range of industry standard system boards packaged with a NEMA4/12, IP65 operator interface. The sealed operator interface includes 12 function keys, and an alpha-numeric key pad with mouse function. The alpha-numeric keypad is located on a sealed access door that protects and secures removable media. The removable media can include floppy diskettes, CD-ROMS, or PCMCIA cards. There are mounting locations for two fixed disk drives, either IDE or SCSI. The system board provides an IDE drive controller. SCSI devices would require an additional controller for SCSI devices to be installed in the system.

The system access door can be locked or not locked dependent on user requirements. The locking mechanism is controlled by password which is entered at the operator keypad. Without password protection, access is obtained by pressing a single button.

The system board is specifically designed for the 8609 to provide full length expansion slots and a cool running motherboard. Two large, filtered intake fans are mounted to direct massive air flow towards temperature sensitive system components keeping them cool and reliable.

SPECIFICATIONS

Processor	80486SX/33, 80486DX2/66 or 80486DX4/100
Cache Memory	0KB Internal on 80486SX 8KB Internal on 80486DX2 16KB Internal on 80486DX4
External Cache Memory	0KB on 80486SX 128KB on 80486DX2 256KB on 80486DX4
Expansion Slots	8 Full Length AT 16-bit (1 used by system)
Power Supply	200W 90-230VAC, Universal
Display	Active Matrix (TFT) Color LCD Flat Panel 640 X 480 X 256 Color Flat Panel Display Controller Included in System Optional Resistive Touch Screen
Disk Drive	2.88MB 3.5" Floppy Included
Disk Drive Mounting	Up to Two 3.5" Devices, IDE or SCSI, Internal Up to One 5.25" Device, IDE or SCSI, Front Panel Access
Serial Ports	Two 16550 Equivalent
Parallel Port	One Centronics Compatible
Dimensions (W X H X D)	19.0 X 12.2 X 18.0in (482.6 X 310.4 X 458.4mm)
Weight	52lbs (23.6kg)
Operating System Supported	MS-DOS, Windows 3.11, OS/2, Warp, & PC-DOS

ORDERING GUIDE

Model 8609-486S/33. . . . $11535.00
486SX System, Display, Floppy Drive, 4MB RAM

Model 8609-486/66 . . . . $12385.00
486SX System, Display, Floppy Drive, 128K Cache, 8MB RAM

Model 8609-486/100 . . . $13085.00
486SX System, Display, Floppy Drive, 256K Cache 8MB RAM

Model 8609-486S/33RT. . $11935.00
486SX System, Display, Resistive Touch Screen, Floppy Drive, 4MB RAM

Model 8609-486/66RT. . . $12785.00
486DX2 System, Display, Resistive Touch Screen, Floppy Drive, 128K Cache, 8MB RAM

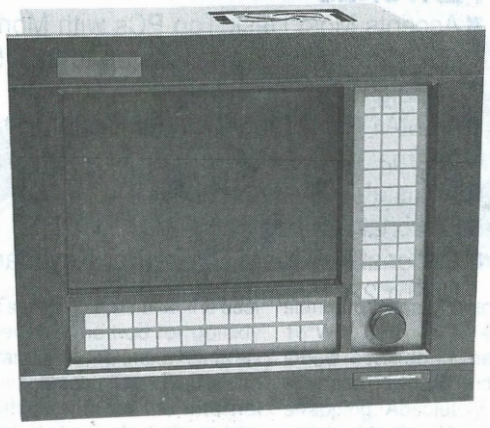
Model 8609-486/100RT. . $13485.00
486DX4 System, Display, Resistive Touch Screen, Floppy Drive, 256K Cache, MB RAM

Call For Your Custom/Special Requirements

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

NEMA Sealed System
or Monitor with Touchpads

Model 8605-4862



FEATURES

- NEMA4/12 System Front Panel
- Single Board CPU/Passive Backplane
- Three User Expansion Slots
- Choice of CPU Models

Faxline Document #:1180*

Made in USA

Both the system unit and the monitor provide full NEMA4 and NEMA12 security at the front panel. The system unit, Model 8605, is available with a choice of many CPU configurations from 80486SX through 80486DX4. The PCI local bus video adapter provides extremely fast video presentations. If needed, the keypad operates in parallel with a standard AT compatible keyboard plugged in either at the front panel or at the rear panel. Two serial ports and a parallel port are supplied. The system may have an internally mounted hard disk for program and data storage. For uploading or downloading, the portable, external floppy disk drive, Model FDD-8605, is available which plugs in at the rear panel of the 8605. The Model 9403-RV monitor provides an operator touchpad which is programmable through a serial data port on the rear of the unit. Programmed key functions are stored within the monitor in nonvolatile memory and are connected to the system unit via a standard AT compatible keyboard interface.

SPECIFICATIONS

Dimensions (W x H x D)
8605
19.0" x 15.7" x 16.5"
(483 x 399 x 419 mm)
9403
19.0" x 12.2" x 16.5"
(483 x 232 x 313 mm)

Monitor
8605
14"D, 640 x 480 pel, VGA Analog
9403
14"D, 800 x 600(NI), SVGA
1024 x 768(I)

Keypad
8605
52 Keys, Numerics, Cursor Control, Function
9403
52 Keys, Numerics, Cursor Control, Function
AT Keyboard Cable to System Chassis

Operating Temperature
0 to 50°C (32 to 122°F)

Operating Shock
8605 - 15G, 18mSec
9403 - 15G, 11mSec

Power Requirement
90 to 230VAC, Auto-selected 47 to 63Hz

Drive Mount
8605
Optional Internal Hard Disk
Optional External, Portable Floppy
9403
None, Display/Keypad Only

CPU
8605
Choice of 486SX, 486DX, 486DX2 or 486DX4
9403
None, Display/Keypad Only

Expansion Slots
8605
3 Full Length, 1 Half Length
9403
None, Display/Keypad Only

ORDERING GUIDE

***Model 8605-4864** $6549.00*
System Unit, 486DX4/100 CPU, 0K RAM, 128K Cache

***Model 8605-4862** $6449.00*
System Unit, 486DX2/66 CPU, 0K RAM, 128K Cache

***Model 8605-486S** $6399.00*
System Unit, 486SX/33Mhz CPU, 0K RAM, 128K Cache

***Model 9403-RV** $2879.00*
Display, Programmable Keypad (Appearance differs from 8605 Model)

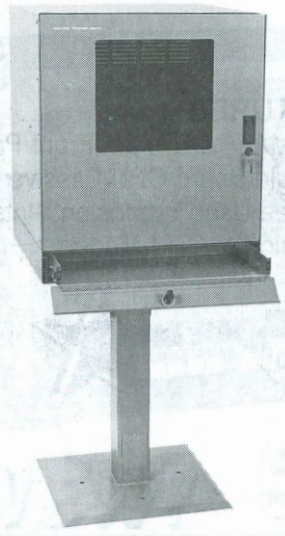
ACCESSORIES

***Model FDD-8605** ..... $ 399.00*
Portable External Floppy Drive, 1.44MB for 8605, Plugs into Power and Signal Connectors at Rear Panel

See page 10 for specifications on the SB486PV Series CPU's incorporated in these systems. Call for more information on Networking Operating Systems

Factory Floor Workstation Enclosure

Model 6250A



FEATURES

- Accepts Most Desk Top PCs with Monitors OR Terminals/X-Terminals up to 22" (559mm) in Height
- NEMA1 Protection for Your System/Station
- Internal Keyboard Storage
- Adjustable System Height
- Optional Cooling Fan
- Optional Keyboard Drawer for Keyboards Up To 22" (559mm) Wide

Made in USA

The 6250A provides an enclosure for PC's or Workstations used in factory floor applications. A keylock push release latch is included on the front panel to discourage tampering with the PC disk drives or connections. The optional pedestal base may be added to the enclosure to permit height adjustment of the display in 1.5" (38 mm) increments. An optional keyboard drawer is available that mounts between the system/terminal enclosure and the base pedestal. The drawer provides easy, although lockable, access to the PC or terminal keyboard for operators.

Without the optional cooling fan, a temperature rise over ambient of approximately 12°C for a typical PC with a 200W power supply and a monitor using about 150W of power (e.g., a NEC Multisync-3FGE) can be expected. Tests with the cooling fan indicate a minimal 2° to 5°C rise over ambient.

System cabling is routed through the pedestal base to an exit near the base of the column. For your special requirements, the large rear panel may be user modified to provide system connections for interface wiring.

SPECIFICATIONS

SYSTEM ENCLOSURE DIMENSIONS

External (W x H x D)	24.0" x 24.5" x 23.0" (610 x 622 x 584 mm)
Monitor Window (W x H)	12.5" x 9.75" (318 x 248 mm)
Internal (W x H x D)	22.63 x 23.13 x 22.00" (575 x 588 x 559 mm)
Weight	87lbs (39.5kg)

OPTIONAL

Pedestal Dimensions	Base: 20" x 20" (508 x 508 mm) Column Height: 28" to 39" (71.12 to 991 mm) 4" Square, Hollow (76 mm) Weight: 52lbs (23.6kg)
Keyboard Drawer	External: 24.0" x 3.37" x 23.0" (610 x 86 x 584 mm) Internal: 21.76" x 1.99" x 9.9" (553 x 51 x 197 mm) Weight: 28lbs (12.7kg)
Fans	2 each 106CFM Intake Cooling Fans for Rear Panel Mounting 115VAC or 220VAC Models

ORDERING GUIDE

Model 6250A-1 ..... ***$ 995.00***
Basic System/Terminal Enclosure, Assembly Required

Model 6250A-2 ..... ***$ 425.00***
Keyboard Drawer Option, Keyboard Not Included, Provided with Slides, Assembly Required

Model 6250A-3 ..... ***$ 325.00***
Adjustable Pedestal Base, Assembly Required

Model 6250A-4 ..... ***$ 135.00***
Dual Cooling Fans, 120VAC, Mount on 6250A-1 Rear Panel

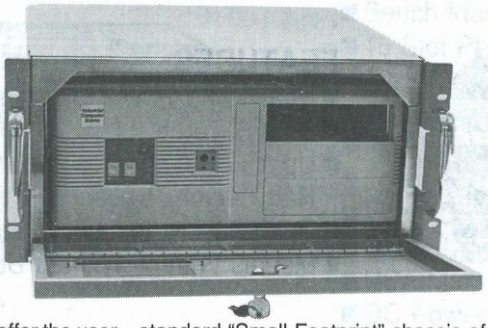
Model 6250A-5 ..... ***$ 135.00***
Dual Cooling Fans, 220VAC, Mount on 6250A-1 Rear Panel

Call For Your Custom/Special Requirements

Universal Rack, Bench Top & Under Bench Mount Enclosures

PC Mounting Chassis

Model 6200-UMR



Made in USA

The 6200-UMx series chassis offer the user a quick, inexpensive method for quickly incorporating standard PC's into a relatively safe working environment. The chassis can be ordered with or without the internal vibration damping platform which "floats" the PC on a set of shock absorbers. If your working area has vibrations caused by passing forklifts or lifting machinery or from other operating machinery, the vibration damping platform is a highly valuable feature! The chassis will accept most standard "Small Footprint" chassis of up to 16"W x 7"H x 16"D (406 x 178 x 406mm). Once installed in the chassis, the PC is strapped down with industrial strength velcro strapping. Absolutely no modifications are required to the PC itself. A keylock on the front panel prevents unauthorized access of the floppy drive or power/reset controls for system security. For additional cooling capability, an optional fan and filter may be mounted in the front panel.

FEATURES

- Universal Enclosure for "Small Footprint" PC's
- Rack or Bench Top Mounting
- Optional Cooling Fans
- Internal Vibration Damping Platform
- Rack Mounts Any Brand PC
- Open Backed For Easy Cable Access

SPECIFICATIONS

Dimensions (W x H x D)	Rack Mount 19" x 8.625" x 20.75" (483 x 219 x 527mm)
	Bench Top 17" x 8.625" x 20.75" (432 x 219 x 527mm)
Internal Mounting Space	16" x 7" x 16" (406 x 178 x 406mm)

ORDERING GUIDE

Model 6200-UMR ..... $ 395.00
Rack Mount Chassis, No Vibration Damping

Model 6200-UMRV .... $ 495.00
Rack Mount Chassis, Vibration Damping Platform

Model 6200-UMB ..... $ 395.00
Bench Top Chassis, No Vibration Damping

Model 6200-UMBV .... $ 495.00
Bench Top Chassis, Vibration Damping Platform

ACCESSORIES

Model 6200-FANA .... $ 125.00
Fan Option with Filter, 110VAC Fan

Model 6200-FANB..... $ 175.00
Fan Option with Filter, 220VAC Fan

Model 7500-RMK ..... $ 75.00
Rack Mount Slide Rails, 24" to 30" Depth Cabinet

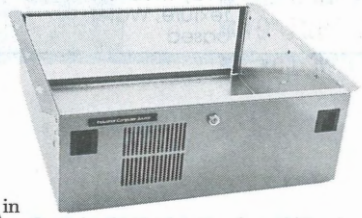
Under Bench Mount Enclosure & Table Mount Enclosure

FEATURES

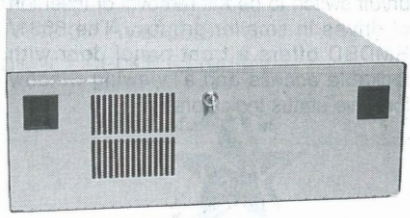
- Accepts Most Desk Model PCs up to (W x D x H) 20.5 x 17 x 7.25in (521 x 432 x 184mm)
- Front Panel Air Intake Filter
- Mounts Under Bench/Table
- Optional Slide Rails
- Front Panel Keylock
- Also Available as Bench Top Mount
- Open Backed For Easy Cable Access

Made in USA

Model 6200-UBM



Model 6200-TBM



ORDERING GUIDE

Model 6200-UBM ..... $ 295.00
Under bench mounting with drill template

Model 6200-TBM..... $ 395.00
Bench top model with top cover

ACCESSORIES

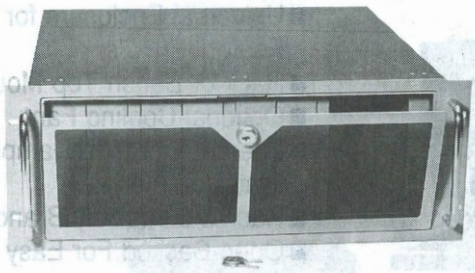
Model 6200-UBMSK ..... $ 95.00
Slide rail kit for 6200-UBM

Model 6200-FANA ..... $ 125.00
120VAC Fan option to draw more filtered air into the chassis enclosure

Model 6200-FANB..... $ 175.00
220VAC Fan Option

Rack Mount Drive Bays

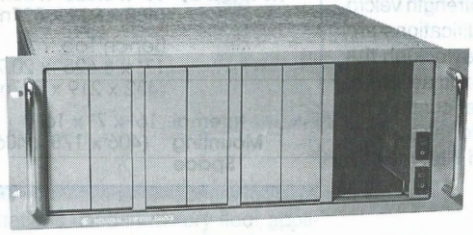
Model 6531-RMDBD



FEATURES

- Dual 150W Power Supplies
- 60CFM Filtered Input Cooling Fan
- Up to 4 Full Height Devices or 8 Half Height Devices
- Drives Easily Installed/Removed
- Models With or Without Door

Model 6531-RMDB



Made in USA

The 6531-RMDB provides physical mounting for up to eight half-height devices. Each of the four drive cages will accept single 5.25" full-height devices or dual 5.25 half-height devices. The rear panel includes knockouts for SCSI input and SCSI output connectors to daisy chain drive bays. The filtered input cooling fan adds to the cooling power of the fans in the two power supply modules. Each 150W, 120/220VAC selectable, power supply has a separate on/off switch to permit removal or insertion of drives in smaller groups. The 6531-RMDBD offers a front panel door with lockable access and a viewing window for drive status indicators.

SPECIFICATIONS

Dimensions (W x D x H)	17 x 17.25 x 6.96" (432 x 438 x 177 mm) 19" (483 mm) Wide at the Front Panel
Construction	0.055" Steel, Gold Zinc Plated Chassis Front Panel Painted 0.125" Aluminum Paint - Cardinal Paint, #8103-44705, Gray Medium texture, Water based
Power Supply	Dual 150W, 90-132VAC or 180-260VAC, 47-63Hz 16A @ +5VDC, 0.5A @ -5VDC 5.5A @ +12VDC, 0.5A @ -12VDC
Cooling	60CFM Filtered Intake to Augment the 24CFM Exhaust Fan in Each Power Supply Module

ORDERING GUIDE

Model 6531-RMDB .... $ 695.00
Drive Bay, Power Supplies, Cooling Fan

Model 6531-RMDBD ... $ 895.00
Drive Bay with Locking Door, Power Supplies, Cooling Fan

ACCESSORIES

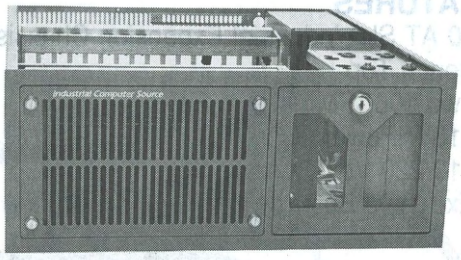
Model 7500-RMK ..... $ 75.00
Rack mount slides for 24" to 30" Depth Cabinets

Model 7500-RMK18 ... $ 75.00
Rack mount slides for 18" to 24" Depth Cabinets

See Pages 60-62 for Mass Storage Devices
See Page 64 for SCSI RAID Drive Modules

15 & 10 Slot Bench Top Chassis

Model 7615-23V



FEATURES

- Bench Mount Chassis
- 15 Slot Passive Backplane or Mount for AT Motherboard
- 250W Power Supply
- Filtered, Positive Air Pressurization
- Locking Front Panel Access
- Vibration Protection Drive Mounting
- UL, CSA, FCC & TUV
- USA Manufactured
- DC Power Models Available

Made in USA

The 7615-23V and 7608-23V chassis provide similar features for passive backplane and motherboard systems respectively as the 7415 and 7408-23V chassis described earlier but for bench top usage verses rack mounting application requirements.

Both chassis are ruggedized for use in more harsh industrial or commercial environments where vibration and/or airborne contaminants present a hazard to standard office systems. The chassis provide for mounting of up to 3 half-height devices in addition to the 3.5" floppy drive mount location. All fixed disk drive devices are provided with shock mounts for protection against industrial vibration.

The 7615-23V chassis includes a fifteen slot, four-layer, low capacitance backplane incorporating all 16 bit AT slot connectors and the exclusive Bus Power Check™ circuitry from Industrial Computer Source. A hold down bracket to secure the optional feature cards in position is provided to insure that cards remain firmly seated even under typical industrial vibration.

The 7608-23V chassis provides mounting space for Baby and Full Size AT motherboards.

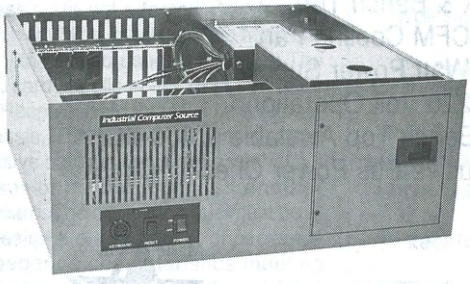
Call for DC Power Models! (See pages 20 for full specifications)

ORDERING GUIDE

Model 7615-23V . . . . . $ 1229.00
Chassis, power supply, 15 slot backplane

Model 7608-23V . . . . . $ 1029.00
Chassis, power supply, mount location for motherboard CPUs

Model 7610-14H



FEATURES

- 10 AT-slot Backplane or Standard IBM PC/AT Motherboard
- Supports 4 Half-height Drives
- 250W Power Supply
- Fan (Optional 106CFM Filtered Fan)
- Low Cost
- Optional Watchdog Timer Available
- 19" Rack Mount Version Available
- Exclusive Bus Power Check™ Circuitry

Made in USA

The 7610-14H Industrial Chassis is an inexpensive bench top chassis. The chassis is made of heavy-gauge steel and provides a 10 AT-slot passive backplane for installation of PC/XT/AT and 80486 CPU cards. A 250W power supply provides ±5VDC and ±12VDC to the back-plane and disk drives. A removable drive mounting bracket allows mounting for four half-height drives accessible through the front door.

The 7608-14H Industrial Chassis is of the same construction as the 7610, but provides for installing an 8-slot XT or "baby AT" style active motherboard. The power supply provides a power-good signal for these backplanes.

ORDERING GUIDE

Model 7610-14H . . . . . $ 1055.00
Includes 10 AT-slot backplane

Model 7608-14H . . . . . $ 855.00
Mounting for Motherboard

ACCESSORIES

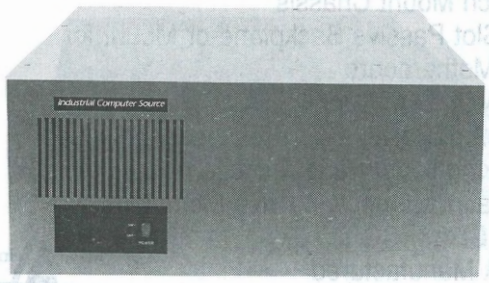
Model 7515-FAN . . . . . $ 65.00
Fan kit

Model 7610-14H-DC___ $ CALL
Models for 12, 24 or 48 VDC available

DC Power Models available for +12, +24, +48 or -48 VDC mains! (See pages 24 for full specifications)

20 & 15 Slot Bench Top Expansion Chassis

Model 7620-XC



FEATURES

- 20 AT Slot Industrial Expansion Chassis
- Bench Top
- Two 106CFM Cooling Fans
- 315W Power Supply
- 110/220 Volt Operation
- Exclusive Bus Power Check™ Circuitry

Made in USA

The 7620-XC provides 20 IBM PC/XT/AT compatible I/O slots in a bench top chassis. The chassis is constructed of heavy gage steel and aluminum.

The integrated 315W power supply provides abundant power for most applications with a full 35 Amps of +5 VDC. Cooling is provided by two 106 CFM filtered fans.

Use the 7620-XC as a diskless computer for remote operatorless stations as cell controllers, robot controllers, etc.

The 7620-XC can also be used as an expansion chassis to increase the option capacity of standard computer systems.

EXPANSION INTERFACE KIT

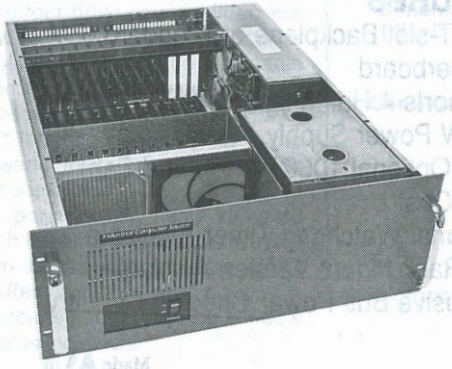
The Model ECIK-ATLT expansion chassis interface kit provides the necessary signals and handshaking to connect the AT bus of your expansion chassis to the AT bus of your host system. Transparent hardware and software, the ECIK-ATLT is installed quickly and easily into most AT compatible host systems. The transmitter card can even be installed into many laptop PC's for controlling the expansion chassis. See page 39 for a full page description.

ORDERING GUIDE

Model 7620-XC..... $ 1695.00
Bench Top 20-slot expansion chassis with power supply

Model ECIK-ATLT..... $ 520.00
16-Bit Data Bus, Card Set & 3' (0.9 m.) Cable (refer to page 39)

Model 7500-XC



FEATURES

- 15 AT Slot Industrial Chassis
- Rack & Bench Top
- 106 CFM Cooling Fan
- 315-Watt Power Supply
- 110/220 Volt Operation
- 19" Bench Top Available (7600-XC)
- Exclusive Bus Power Check™ Circuitry

Made in USA

The 7500-XC provides 15 IBM PC/XT/AT compatible I/O slots in a 19" rack mount chassis. The 7600-XC provides the same features in a bench top version. Both are constructed of heavy gage steel and aluminum.

The integrated 315W power supply provides abundant power for most applications with a full 30 Amps of +5 VDC. Cooling is provided by a 106 CFM filtered fan for the card cage area and a separate 24CFM fan for the power supply module. An optional second 106CFM fan is available for heavier duty requirements.

Use the 7500/7600-XC as a diskless computer for remote operatorless stations as cell controllers, robot controllers, etc.

The 7500/7600-XC can also be used as an expansion chassis to increase the option capacity of standard computer systems.

EXPANSION CABLE

(See page 39 for Expansion Cable information.)

ORDERING GUIDE

Model 7500-XC..... $ 1475.00
19" Rack Mount chassis with power supply

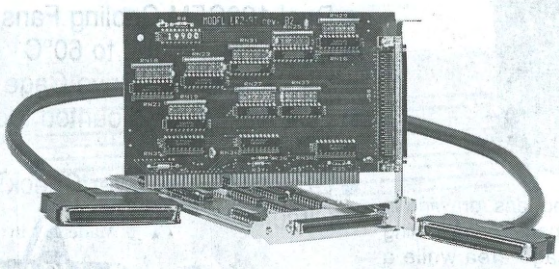
Model 7600-XC..... $ 1475.00
Bench Top 15-slot expansion chassis with power supply

ACCESSORIES

Model 7515-FAN..... $ 65.00
7500/7600 second fan

Expansion Chassis Interconnect Kits

Model ECIK-ATLT



FEATURES

- AT Bus Expansion for ISA and EISA Chassis
- Fits in Laptop Bus Expansion Slots
- Transparent to System Setup
- No Software Drivers Required
- Operating System Independent
- Supports DMA and IRQ Operations

Made in USA

Faxline Document #:1044

The model ECIK-ATLT bus expansion kit permits the addition of your system to accept additional feature adapter cards. A wide range of feature card types may be installed in the expansion chassis with very few restrictions. Most cards that do not incorporate bus mastering and cards that do not incorporate or require the Compressed Write Timing signal may be successfully installed in the expansion chassis. Capabilities of the host chassis are not affected. Any feature card which could be installed in the host may still be installed and used in the host. The Transmit card installs in the Host computer and the Receiver card installs in the expansion chassis. The expansion chassis must be a passive backplane, i.e. may not have a processor of its own such as another motherboard. The expansion bus must be of sound design, i.e. resistance, capacitance and impedance characteristics meeting current engineering standards for Intel bus architecture. The ECIK-ATLT has been successfully used in systems of bus speeds up to 16Mhz (the normal AT bus clock is about 8Mhz) and CPU clock speeds of 50Mhz. In addition to expanding AT systems, the ECIK-ATLT can be used in EISA systems to expand the AT bus portion of the backplane.

The three foot (0.9 meter) interconnect cable offers sufficient distance between chassis for most system applications. The connectors on the rear of the transmit and receiver cards are quick disconnecting when chassis must be moved or pulled forward on cabinet slides.

SPECIFICATIONS

Bus	16 bit AT
Wait State	Jumper Selectable for 0 or 1
Power Required	1.3A @ +5VDC - Transmitter Card 1.4A @ +5VDC - Receiver Card

DIMENSIONS (L x Seated Height)

Transmitter	6.44" x 3.9" (164 x 99mm)
Receiver	6.73" x 3.9" (171 x 99mm)

Max. Bus Clock	16Mhz
Max. Cable Length	3 ft (0.9 meter)
Cable Supplied	3 ft (0.9 meter)

OPERATING ENVIRONMENT

Temperature	0 to 60°C
Humidity	5 to 90% RHNC

STORAGE ENVIRONMENT

Temperature	-50 to 120°C
Humidity	0 to 90% RHNC

ORDERING GUIDE

Model ECIK-ATLT ..... ***$ 520.00***

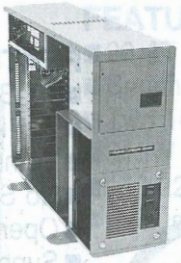
Two Board Set with 3' (0.9 m) Interconnect Cable

15 & 10 Slot Floor Mount Chassis

The 7915-33H and 7918-33H chassis are revisions of the standard rack mounted chassis, the 7515-33H and 7508-33H, engineered to provide you the same rugged protection for your computer system in a floor mounted configuration. Made of heavy gage steel, the 7915-33H chassis incorporates an IBM PC/XT/AT compatible passive backplane with 15 full length slots while the 7918-33H has mounting accommodations for most full size and "baby" AT motherboards. Provisions are made for mounting up to three half -height disk drives in the shock mounted drive cage.

The power supply generates a more than ample 315W with up to 35 Amps available on the +5 VDC bus. The -5V, +12V and -12V supplies are also very generous.

Model 7915-33H



Dual 106 CFM cooling fans, drawing in filtered air from the front panel, pass cooling air through the card cage area while a separate, filtered intake, cooling fan is provided for the power supply module.

FEATURES

- 15 AT-slot Passive Backplane or Motherboard
- 315W Power Supply
- Dual 106CFM Cooling Fans
- Operation From 0 to 60°C
- Shock Mounted Drive Cage
- Optional Shock Mounted Floor Stand
- Exclusive BusPower Check™ Circuitry

Made in USA

SPECIFICATIONS

Backplane	Passive- 7915 Active- 7918
Power Supply	90-132VAC or 180-260VAC Input, 47 to 63 Hz 315W Output +5VDC @ 35A +12VDC @ 10A -12VDC @ 1A -5VDC @ 1A
Cooling Fans	Two 106 CFM Fans Filtered at 60ppi, Card Cage One 24 CFM Fan Located in Power Supply
Disk Drive Capacity	Three half-height or One full-height and One half-height 5¼" Drive Bays Vibration Dampened
Dimensions (W x H x D)	7.00 x 17.00 x 25.00in (178 x 432 x 635 mm)
Weight	50 - 70 lbs (22.5 - 31.5Kg) depending on configuration
MTBF	> 100,000 P.O.H. @ 30°C.

ORDERING GUIDE

Model 7915-33H $2059.00
Includes 15 AT-slot backplane

Model 7918-33H $1799.00
Mounting for motherbard

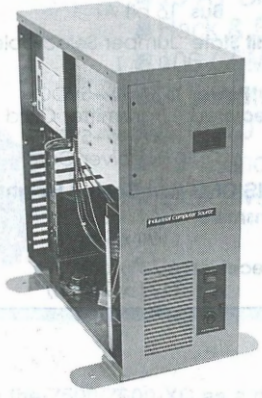
ACCESSORIES

Model 7900-SMS . . . . . $ 75.00
Shock mounted floor stand includes two stands.

The 7910-13H and 7908-13H are adaptations of the rack mount chassis models 7410 and 7408. The modifications were made to provide you with the same cost effective rugged chassis design for your floor mount applications. The chassis are made of heavy gage steel and provide a 10 AT-slot passive backplane in the 7910 or mounting for "Baby" AT motherboards in the 7908.

The backplane is a fully 100% IBM compatible ISA bus (16 bit) with the standard configuration offering AT positions. Special configurations and combinations are available. The backplane offers the highest available degree of freedom from EMI/RFI noise by incorporating a four-layer, low capacitance construction.

Model 7910-13H



FEATURES

- 10 AT-slot Passive Backplane or "Baby" AT Motherboard Mounting
- Mounting for up to Three Shock Mounted Half Height Drives
- 250W Power Supply
- 50CFM Cooling Fan
- Optional Shock Mounted Floor Stand
- Exclusive Bus Power Check™ Circuitry

Made in USA

SPECIFICATIONS

Backplane	Passive- 7910 Active- 7908
Power Supply	90-132VAC or 180-260VAC Input, 47 to 63 Hz 250W Output +5VDC @ 26 Amps +12VDC @ 9 Amps -12VDC @ 0.5 Amp -5VDC @ 0.5 Amp
Cooling Fans	One 50 CFM Fan, Located in Power Supply Optional 106 CFM Fan
Disk Drive Capacity	Three half-height or One full-height and One half-height 5¼" Drive Bays Vibration Dampened
Dimensions (W x H x D)	7.00 x 17.00 x 17.00in (178 x 432 x 432 mm)
Weight	35 - 60 lbs (15.75 - 27.0Kg) depending on configuration
MTBF	>100,000 P.O.H. @ 30°C

ORDERING GUIDE

Model 7910-13H $1155.00
Includes 10 AT-slot backplane

Model 7908-13H . . . . . $ 955.00
Mounting for motherboard

ACCESSORIES

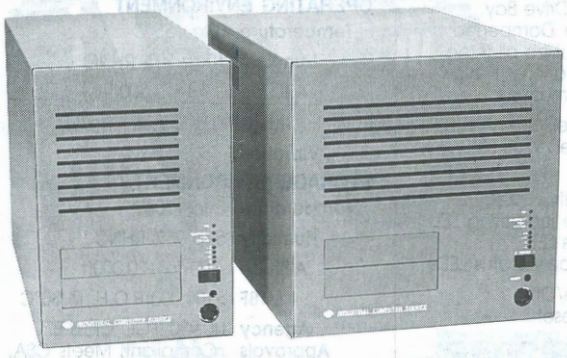
Model 7515-FAN . . . . . $ 65.00
Optional fan

Model 7900-SMS . . . . . $ 75.00
Shock mounted floor stand. Includes two stands.

6 & 10 Slot Passive Backplane
and Motherboard Mount Nodes

NEW EISA & PCI Models!

Model 9200-06 **Model 9200-10**



FEATURES

- 6 and 10 Slot Passive Backplane Models, Motherboard Mount Model
- Up to Three 3.5" Drives Shock Mounted
- 150W Power Supply; DC Input Power Optional
- Filtered Cooling Fans
- UL Recognized
- All Metal Construction

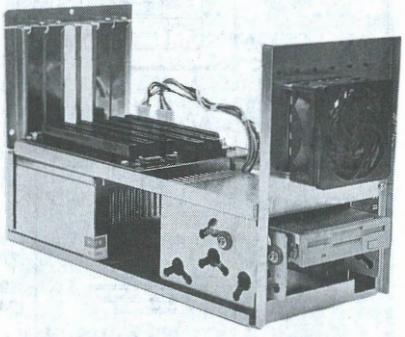
Made in USA

The 9200 series of Node chassis provide a ruggedized, small footprint enclosure for industrial monitoring and control, research data acquisition, workstations and other applications which may involve more hostile environments than the typical office computer can withstand. Several models are offered for varying requirements. For minimum needs the Model 9200-06 offers a four layer, low capacitance passive backplane with six full length expansion slots. The Model 9200-8MB provides the hardware and hole patterns necessary for mounting most of today's Baby-AT motherboards such as our Model P1 series motherboards in the CPU section. For more hardware intensive applications, the model 9200-10 provides a four layer, low capacitance backplane with 10 full length AT expansion slots. For the passive backplane models a full line of plug-in CPU cards is offered with descriptions and specifications provided in this Source-Book.

All three models of Nodes offer filtered front panel intake fans providing pressurization to keep dirt and dust out of your system. The 9200-06 includes a single, front panel 30CFM fan while the 9200-8MB and 9200-10 provide two 30CFM fans. The power supply in all three models is a 150W unit providing ample output for practically any combination of adapter cards and drives. The power supply also has an internal 20CFM fan for additional cooling power.

The chassis provide vibration damped mounting locations for up to three 3.5", 1" high drive devices. Two locations have front panel access while a third location is geared toward internal, 3.5", 1" high fixed disk drives. With today's drive capacities, over 1 Gigabyte is available in the 3.5" size.

Front panel controls for the chassis include the standard DIN connector for AT keyboards, the power On/Off switch and a recessed reset switch. Indicator LED lights are provided for Hard Disk access activity, power On, and a separate indicator for each power supply output as a quick, front panel check of system viability. The chassis speaker is provided with an amplifier circuit allowing user internal adjustment of volume from 1% to 500% of nominal.



Model 9200-06
(side view with cover removed)

DC Power Models Available CALL!

6 & 10 Slot Passive Backplane
and Motherboard Mount Nodes (cont.)

SPECIFICATIONS

Mounting Desktop

Backplane Passive: 9200-06, 9200-10
Active: 9200-8MB

Bus Architecture ISA
EISA or PCI Available for 9200X-10 Chassis

Number of Slots ISA: 9200-06: 6 Full Length, 9200-10: 10 Full Length
EISA: 9200E-10: 10 Full Length
PCI: 9200P-10: 6 ISA Full Length, 2 PCI Full Length

Power Supply 90-135VAC or 180-265VAC Input, 50/60Hz (400Hz Optional), Switch Selectable
150Watt Output
+5VDC @ 16A
+12VDC @ 5.5A
-5VDC @ 0.5A
-12VDC @ 0.5A

Cooling Fans 9200-06: One 30CFM Front, One 20CFM Power Supply
9200-10 and 9200-8MB: Two 30CFM Front, One 20CFM Power Supply

DISK DRIVE CAPACITY

Front Access Two 3.5" Drive Bays, Vibration Dampened

Internal One 3.5" Drive Bay, Vibration Dampened
Note: To utilize all three drive locations, 1" high devices must be used.

Keyboard Connector Locations Front Panel
Rear Panel- 9200-8MB only

Front Panel Indicators Disk Activity LED
Overtemp Indicating LED
Fan Status LED
Power Supply Status LEDs

Front Panel Controls Power On/Off
System Reset

DIMENSIONS (W X H X D)

9200-06 6.62 x 9.46 x 15.72in (168 x 240 x 399mm)

9200-10, 9200-8MB 9.50 x 9.46 x 15.72in (241 x 240 x 399 mm)

Weight 9200-06: 16lbs, 7.27kg
9200-10, 9200-8MB: 18lbs, 8.18kg

OPERATING ENVIRONMENT

Temperature 0 to +55°C

Humidity 10 to 90% RHNC

Altitude 0 to +10,000ft

Shock 10g, 3 Axis

Vibration 1.5g, 3 Axis

STORAGE ENVIRONMENT

Temperature 0 to +70°C

Humidity 5 to 95% RHNC

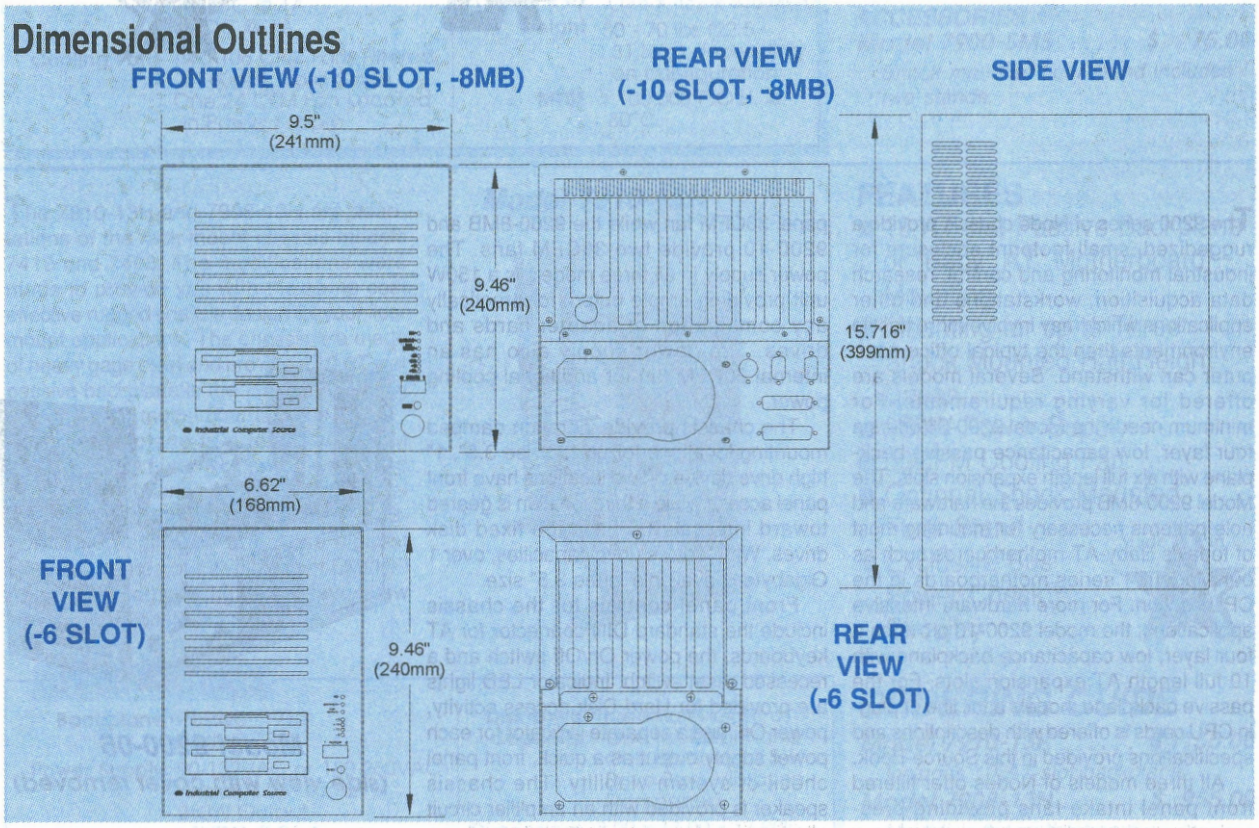
Altitude -300 to +20,000ft

MTBF >100,000 P.O.H. @ 30°C

Agency Approvals UL 950, FCC Class B Compliant; Meets CSA, VDE and TUV Requirements

Specifications are for the chassis, power supply, and backplane. Choice of motherboard CPUs or other user selected feature cards may reduce the maximum specifications. Special Backplanes and colors available on request. Consult the factory for a quotation to fill your requirements.

Dimensional Outlines



ORDERING GUIDE

Model 9200-06 ..... ***$ 695.00***
6 Slot passive backplane

Model 9200-10 ..... ***$ 795.00***
10 Slot passive backplane

Model 9200E-10 ..... ***$ 1115.00***
10 Slot passive backplane, EISA

Model 9200P-10 ..... ***$ 1155.00***
6 ISA, 2 PCI Slot passive backplane

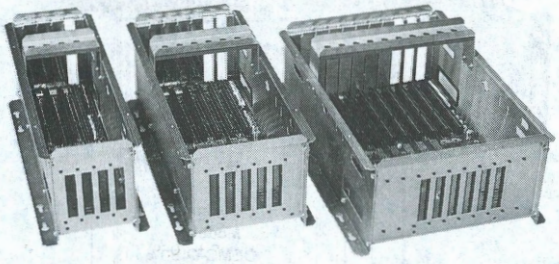
Model 9200-8MB ..... ***$ 645.00***
Motherboard Mount with Hardware

Call For Your Custom/Special Requirements

OEM Card Cage

NEW 4-Slot Version!

Model OEMC Family



FEATURES

- Simple, Durable, Steel Construction
- Choice of Passive Backplanes or Motherboard Mounting Kit
- ISA, EISA or ISA/PCI Passive Backplanes
- 4, 6, 10 or 15 Slot Backplanes
- Optional AC or DC Input Power Supply Modules

Made in USA

The OEMC series of chassis and accessories is designed to give the system builder an easy to use card cage for cabinet or panel installations. The all steel construction of this cage assures that your computer cards and adapter cards will be protected. All card cages include an adapter card restraining bracket across the top to hold your feature cards in place even under vibration. A choice of backplane configurations as well as power supply modules is presently available. The OEMC series of components is being added to on a continuing basis. As with other Industrial Computer Source products, we will be happy to custom design and build cages or modules to fit your requirements. The Models OEMC-04S and OEMC-06S have been added for applications requiring smaller size and using less than full length cards. These "short" chassis will accept CPU and feature cards up to 7.5" in length.

SPECIFICATIONS

Chassis Dimension: Inches (millimeters)

Model	X	Y	Z
OEMC-04	5.5 (139.7mm)	4.00 (101.6mm)	14.58 (370mm)
OEMC-04S	5.5 (139.7mm)	4.00 (101.6mm)	8.75 (222mm)
OEMC-06	7.28 (185mm)	5.78 (147mm)	14.58 (370mm)
OEMC-06S	7.28 (185mm)	5.78 (147mm)	8.75 (222mm)
OEMC-10/10P/10E	10.47 (266mm)	9.85 (250.2mm)	14.58 (370mm)
OEMC-15/15P/15E	15.425 (392mm)	13.85 (352mm)	14.58 (370mm)
OEMC-8MB	10.47 (266mm)	9.85 (250.2mm)	14.58 (370mm)

NOTE: All OEMC Chassis are 6.5" (165mm) in Height

Power Supplies Dimensions (W x H x L) 4.5" x 6.5" x 6.5" (114 x 293 x 293 mm) Power Supply Modules Include Mounted, Illuminated, On/Off Switch

Operating Temperature 0 to 50°C

Power Supplies 0 to 95% RHNC

POWER REQUIREMENTS

OEMC-P15 110/220VAC, 47-63Hz, User Selectable
150W Output
16A @ +5VDC
5.5A @ +12VDC
0.5A @ -5VDC
0.5A @ -12VDC

OEMC-P25 110/220VAC, 47-63Hz, User Selectable
250W Output
26A @ +5VDC
9A @ +12VDC
0.5A @ -5VDC
0.5A @ -12VDC

OEMC-P30 110/220VAC, 47-63Hz, User Selectable
300W Output
30A @ +5VDC
12A @ +12VDC
0.5A @ -5VDC
0.5A @ -12VDC

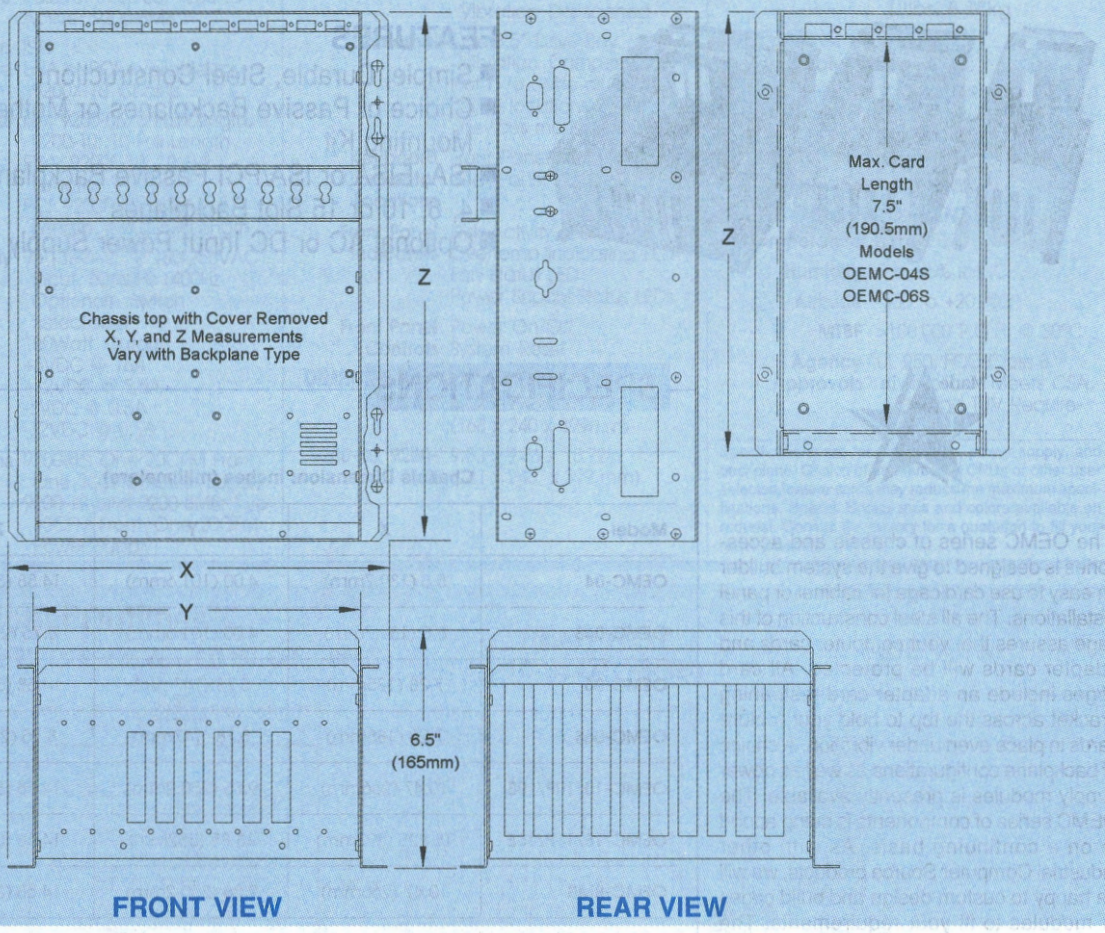
OEMC-PDC24 24VDC
250W Output
25A @ +5VDC
9A @ +12VDC
0.5A @ -5VDC
0.5A @ -12VDC

OEMC-PDC48 48VDC
250W Output
25A @ +5VDC
9A @ +12VDC
0.5A @ -5VDC
0.5A @ -12VDC

OEMC-FAN, OEMC4-FAN < 0.05A @ +12VDC

OEM Card Cage (cont.)

Dimensional Outlines



ORDERING GUIDE

CARD CAGES

Model OEMC-04 . . . . . $ 199.00
4 Slot Chassis, ISA Bus Backplane

Model OEMC-04S . . . . . $ 199.00
4 Slot Short Chassis, ISA Bus Backplane; Accepts Feature Cards to 7.5" L

Model OEMC-06 . . . . . $ 229.00
6 Slot Chassis, ISA Bus Backplane

Model OEMC-06S . . . . . $ 229.00
6 Slot Short Chassis, ISA Bus Backplane; Accepts Feature Cards to 7.5" L

Model OEMC-10 . . . . . $ 269.00
10 Slot Chassis, ISA Bus Backplane

Model OEMC-10P . . . . . $ 629.00
6 ISA/2 PCI Bus Backplane

Model OEMC-10E . . . . . $ 589.00
10 Slot Chassis, EISA Bus Backplane

Model OEMC-15 . . . . . $ 349.00
15 Slot Chassis, ISA Bus Backplane

Model OEMC-15P . . . . . $ 769.00
11 ISA/2 PCI Bus Backplane

Model OEMC-15E . . . . . $ 679.00
15 Slot Backplane, EISA Bus Backplane

Model OEMC-8MB . . . . $ 119.00
Motherboard Mounting Chassis, Mounting Hardware NOT Included, No Backplane, Accepts "Baby AT" Motherboards <13.5" long.

POWER SUPPLIES

Model OEMC-P15 . . . . . $ 179.00
150W, 120/220VAC Power Supply

Model OEMC-P25 . . . . . $ 199.00
250W, 120/220VAC Power Supply

Model OEMC-P30 . . . . . $ 249.00
300W, 120/220VAC Power Supply

Model OEMC-PDC24 . . $ 359.00
250W, 24VDC Power Supply

Model OEMC-PDC48 . . $ 389.00
250W, 48VDC Power Supply

FAN OPTIONS

Model OEMC-FAN . . . . $ 69.00
Cooling Fan Module for 6-15 Slot Chassis, 12VDC Fan. Mounts to Front of Chassis. OEMC-15 Can Accept up to 2 Fan Modules.

Model OEMC4-FAN . . . $ 69.00
Cooling Fan Module for 4 Slot Chassis

COVERS

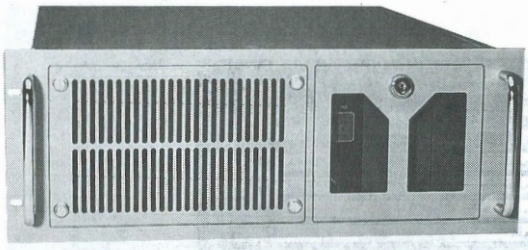
Model OEMC-04C . . . . $ 25.00
Protective Cover for 4 Slot Chassis

Model OEMC-06C . . . . $ 25.00
Protective Cover for 6 Slot Chassis

Model OEMC-10C . . . . $ 25.00
Protective Cover for 10 Slot and Motherboard Chassis

Model OEMC-15C . . . . $ 30.00
Protective Cover for 15 Slot Chassis

Model 11500-23VN



FEATURES

- Digital Equipment Corp. Alpha AXP Processor
- 166Mhz CPU Clock Rate
- Windows NT or DEC UNIX Operating Systems
- ISA and PCI Bus Expansion Slots
- Ruggedized Rack Mount Chassis

These systems are based on the DEC chip 21066-AA Alpha AXP, 64bit, RISC microprocessor known for its performance in floating point and graphical operation applications. With a choice of operating systems that opens up the world of Windows compatibility or of UNIX compatibility, these systems answer your high performance needs. The Alpha AXP processor itself operates at 166Mhz and is upgradable to future releases at 33Mhz multiples.

Here is an opportunity to use your existing ISA compatible feature cards, new PCI feature cards and Windows NT applications to speed up existing applications or create high performance new applications.

These systems are basic building blocks for a full high performance system you configure to suit your application requirements. There are two ways to order - either for Windows NT or for DEC UNIX. The firmware is different on the two versions. To load the operating systems requires a CD-ROM in either case. Once a DEC UNIX system has been setup with the Server Extension, other systems may have their operating systems installed over the LAN.

The system board includes all the standard features required of most systems as well as some advanced features such as PCI Bus expansion slots. Under Windows NT, both FAST SCSI-2 and IDE disk controllers are resident and supported on the motherboard. Under DEC UNIX, the IDE disk controller is not used or supported. The on-board floppy disk controller accepts all current high-density, capacities of floppy disk drives from 1.2MB to 2.88MB in the NT version and both 1.44MB and 2.88MB 3.5" drives in the DEC UNIX configuration. The system chassis will hold up to three 3.5" or 5.25" devices in addition to the 3.5" high density floppy drive. Refer to the 7408-23V chassis for additional drive capacity information. The system board may be optionally mounted in other Industrial Computer Source chassis on special order for increased drive capacities, additional cooling capacity requirements or other than rack mounting configurations.

From these basic configurations, simply add the amount of memory your application requires, the fixed/floppy disk drives you prefer and a video adapter card, either ISA or PCI. PCI feature boards, and some ISA feature boards, require drivers for either Windows NT or DEC UNIX operating systems. Ask your sales application engineer for assistance in choosing a supported feature card.

SPECIFICATIONS

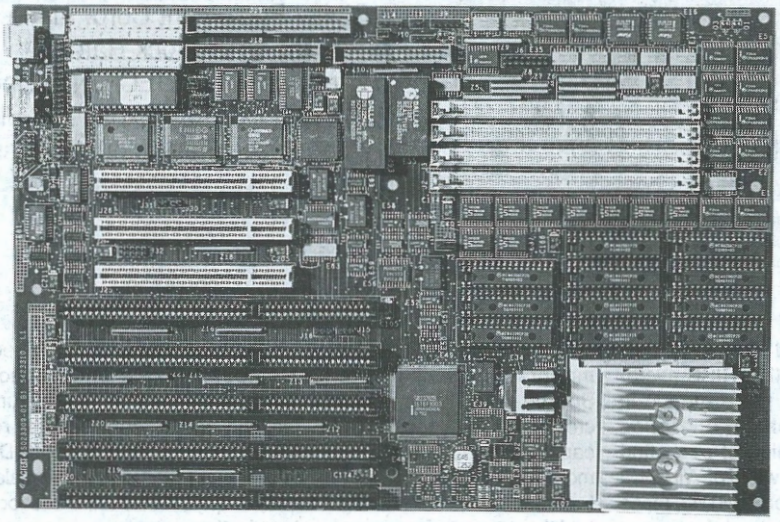
SYSTEM BOARD

Processor	DECchip 21066-AA Alpha AXP Microprocessor
Clock Rate	CPU - 166Mhz ISA Bus - 8.33Mhz PCI Bus - 33Mhz
Word Size	64 Bits
Processor Upgradeable	ZIF for Future Alpha AXP Chips in 33Mhz Multiples
Floating Point Format	IEEE and VAX (F and G)
Memory	8MB Minimum, ECC Corrected 256MB Maximum, ECC Corrected
SIMMs	2 Banks, 2 Sockets per Bank 72 pin SIMMs, 36-bit 70nS or Faster SIMMs Required
Cache Memory	256K or 1MB External C Cache Options

ON-BOARD CONTROLLERS

IDE Fixed Disk Controller	Supports 2 Drives (Under Windows NT Only)
Floppy Drive Controller	Supports 2 Drives 1.2MB, 1.44MB and 2.88MB Under Windows NT 1.44MB and 2.88MB Under DEC UNIX
FAST SCSI-2 Device Controller	Single Ended Controller, 8 bit NCR 53C810 7 Devices Maximum
Serial Comm. Ports	(2), 16550
Parallel Printer Port	(1), EPP
Keyboard Port	AT (Windows NT)
Keyboard Port	PS/2, Mouse Port, PS/2 (DEC UNIX)
Expansion Slot	5 ISA, 1 Location Shared with PCI 3PCI, 1 Location Shared with ISA Limited Length For Feature Cards Varies with Location
Dimensions	Baby AT Size and Hole Pattern 8.66" x 13.0" (220 x 330 mm) 5.57" (142 mm) Highest Point
MTBF	361,000 P.O.H. @ 25°C 173,600 P.O.H. @ 40°C
Operating Temperature	55°C Maximum with Fan Cooled Heat Sink (included, not shown)

ALPHA AXP™ 166Mhz RISC System (cont.)



For Chassis Specifications, refer to Model 7408-23V. Other chassis choices also available. See pages 20-21.

ORDERING GUIDE

Model 11500-23VN . . . . . $ 3995.00
166Mhz System with 256K Cache, 1.44MB Floppy

Model 11500-23VO . . . . . $ 4695.00
166Mhz System with 256K Cache, DEC OSF/1, 2-user License, 1.44MB Floppy. Operating System Media and Documentation Must be Ordered Separately. (Although a C Compiler is included with the operating system, the Developer's Extension must be purchased for use of the debugger.)

Model 11500-23VOF . . . . . $ 4995.00
166Mhz System with 256K Cache, DEC OSF/1, 2-user License, Developer's Extension License, Server Extensions License, 1.44MB Floppy. Operating System Media and Documentation Must be Ordered Separately.

Model 11501-23VN . . . . . $ 4295.00
166Mhz System with 1MB Cache, 1.44MB Floppy

Model 11501-23VO . . . . . $ 4995.00
166Mhz System with 1MB Cache, DEC OSF/1, 2-user License, 1.44MB Floppy. Operating System Media and Documentation Must be Ordered Separately.

Model 11501-23VOF . . . . . $ 5295.00
166Mhz System with 1MB Cache, DEC OSF/1, 2-user License, Developer's Extension License, Server Extensions License, 1.44MB Floppy. Operating System Media and Documentation Must be Ordered Separately.

ACCESSORIES

Model PBXGA-AA . . . . . $ 1189.00
DEC PCI Bus 8-bit Video Card for DEC UNIX

Model PBXGA-AN . . . . . $ 1189.00
DEC PCI Bus 8-bit Video Card for Windows NT

Model WINNT351W . . . . . $ CALL
Microsoft Windows NT Workstation, V3.5, on CD-ROM. The "Client" Configuration.

Model WINNT351S . . . . . $ CALL
Microsoft Windows NT Server, V3.5, on CD-ROM. The "Server" Configuration and Features.

Model OSF/1CD . . . . . $ 279.00
DEC UNIX AXP, CD-ROM Media, On-Line Documentation. DEC QA-MTA4AA-H8. Includes Developer's Extension and Server Extension (License Required) Other Layered Applications Must be Purchased Separately.

Model OSF/1HC . . . . . $ 1200.00
DEC UNIX AXP, Hard Copy Manuals. DEC QA-MT4AA-GZ

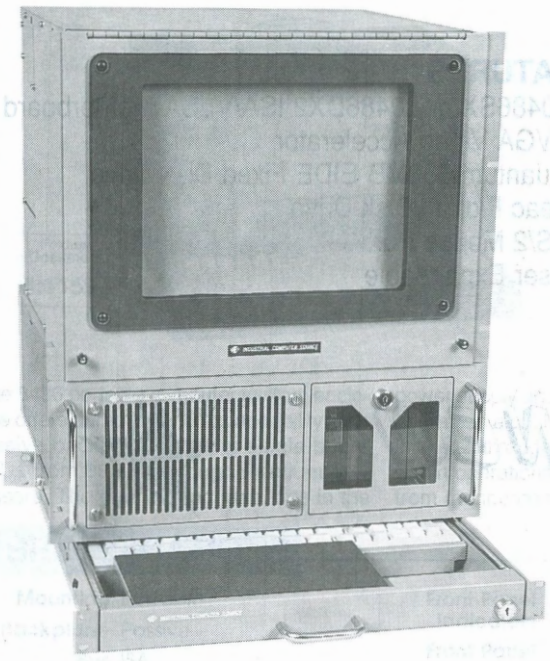
Model OSF/1DK . . . . . $ 930.00
Hard Copy Manuals for Developer's Extension. DEC QA-MT5AA-GZ. (Included in OSF/1HC)

Model OSF/1SE . . . . . $ 15.00
Hard Copy Manuals for Server Extensions. DEC QA-MT6AA-GZ. (Included in OSF/1HC)

Call For Your Custom/Special Requirements

Rack Mount Passive Backplane Systems

Integrated & Tested Systems



FEATURES

- Fifteen or Ten Slot Chassis
- 80486SX or 80486DX2 Processor Board
- SVGA Video Controllers
- Quantum Expanded Fixed Disk Drive
- Teac Floppy Disk Drive
- User Expandable

NEW!

Made in USA

These systems offer a pre-configured, ready-to-go system for industrial applications. The basic configuration provides the processing power and memory requirements for most typical applications. For demanding applications, additional memory and disk drives, or additional feature cards, may be added to your order and installed by Industrial Computer Source prior to shipping to you. You will receive a fully integrated, tested, and "burned-in" system ready to work for you right out of the box.

The chassis used in these systems are described in detail elsewhere in this SourceBook, or you may request additional information from your sales application engineer. The 7415-23V chassis leaves fourteen open adapter expansion slots for your selected feature cards. The 7310-24V leaves nine expansion slots for your use. Each system includes a PV series Single Board CPU card described in the CPU section of this SourceBook. The CPU board includes the floppy and enhanced fixed disk controllers, serial and parallel ports and SVGA Cirrus Logic video with 1MB of RAM.

The system chassis can be ordered with a selection of optional keyboard and monitor rack mount adapters for a fully integrated system.

SPECIFICATIONS

Chassis	7415-23V or 7310-24V
Open Expansion Slots	14 or 9 respectively
Fixed Disk Drive	Quantum 850MB EIDE
Floppy Disk Drive	Teac 1.44MB 3.5"
System DRAM	8MB Installed
Graphics Controller	On Board Cirrus Logic GD543X to 1024 x 768 x 256
Operating System Included	DOS 6.x and Windows for Workgroups 3.x

The price shown for the system chassis does not include the monitor or keyboard assemblies.

ORDERING GUIDE

Model RMSYS1C ***$3789.00***
7415-23V Chassis, 80486SX/33 Processor

Model RMSYS3D ***$3429.00***
7310-24V Chassis, 80486SX/33 Processor

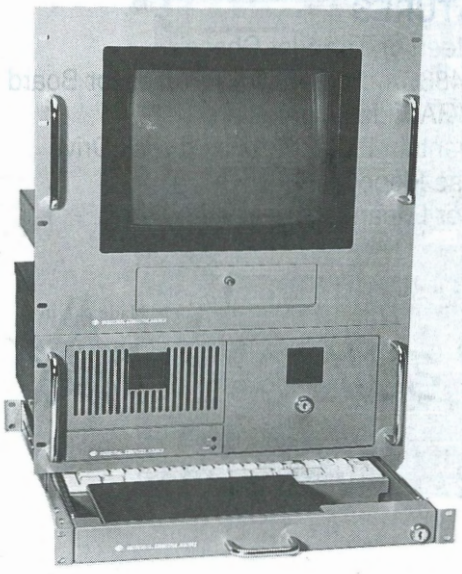
Model RMSYS5B ***$3579.00***
7310-24V Chassis, 80486DX2/66 Processor

Model 6531-KB3M ..... ***$ 375.00***
Keyboard drawer (illustrated) See page 84

Model 6531-UM ..... ***$ 329.00***
Rack mount enclosure for monitor (illustrated) See page 82

Rack Mount Motherboard Systems

Integrated & Tested Systems



FEATURES

- 80486SX or 80486DX2 ISA/VESA Motherboard
- SVGA Video Accelerator
- Quantum 850MB EIDE Fixed Disk Drive
- Teac Floppy Disk Drive
- PS/2 Mouse Port
- User Expandable

NEW!

Made in USA

These systems offer a pre-configured, low cost ready-to-go system for industrial applications. The basic configuration provides the processing power and memory requirements for most typical motherboard applications. For demanding applications, additional memory and disk drives, or additional feature cards, may be added to your order and installed by Industrial Computer Source prior to shipping to you. The systems are fully integrated, tested, and "burned-in" prior to shipping.

The chassis used in these systems are descibed in detail elsewhere in this Source-Book, or you may request additional information from your sales application engineer. Each system includes a P1VP series ISA motherboard CPU card described in the CPU section of this Source-Book. The CPU board includes the floppy and enhanced fixed disk controllers, serial and parallel ports and PS/2 mouse port. The model SVGAX3, or equivalent, video graphics controller offers up to 1024 x 768 resolution with 256 colors

The system chassis can be ordered with a selection of optional keyboard and monitor rack mount adapters for a fully integrated system.

The price shown for the system chassis does not include the monitor or keyboard assemblies.

SPECIFICATIONS

Chassis	7408-23V or 7308-24V
Open Expansion Slots	6 (5 Full Length AT – includes 2 VESA, 1 Full Length XT)
Fixed Disk Drive	Quantum 850MB EIDE
Floppy Disk Drive	Teac 1.44MB 3.5"
System DRAM	8MB Installed
Graphics Controller	SVGAX3 ISA Video Accelerator
Operating System Included	DOS 6.x and Windows for Workgroups 3.x

ORDERING GUIDE

Model RMSYS2C ***$2919.00***
7408-23V Chassis, 80486SX/33 Processor

Model RMSYS4D ***$2589.00***
7308-24V Chassis, 80486SX/33 Processor

Model RMSYS6B ***$2639.00***
7308-24V Chassis, 80486DX2/66 Processor

Model 6531-KB3M ..... ***$ 375.00***
Keyboard drawer (illustrated) See page 84

Model 9014A-R ***$1195.00***
Rack mount monitor (illustrated) See page 81

Call For Your Custom/Special Requirements

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

Portable Computer System

Model 8436-MLCD

Faxline Document #:1159

FEATURES

- 4 User Expansion Slots
- Rugged Aluminum Enclosure
- Detachable Keyboard
- Monochrome or STN or TFT Color LCD
- NEMA12 Rated
- Vibration Damped Fixed Disk Drives
- Universal AC/DC Power Supply
- Padded Nylon Carrying Case

Made in USA

The 8436 portable computer system enclosure offers durability and expandability. The passive backplane accepts single board CPUs from 386DX through Pentium processors. The dual cooling fans, one in the power supply and one in the card cage area, operate in a push-pull mode to move filtered intake air through the box to keep the system within operational ratings. You may choose from monochrome transflective, dual scan passive matrix or TFT active matrix color liquid crystal displays (LCD). The power supply provides 230W from either AC or 12 VDC power input mains.

SPECIFICATIONS

Mounting	Portable
Backplane	Passive
Bus Architecture	ISA
Number of Slots	6 Full Length
Power Supply	90-135VAC or 190-255VAC or 10.7-15.5VDC Input, 47-440Hz 230W Output +5VDC @ 25A +12VDC @ 8A -12VDC @ 0.5A -5VDC @ 0.5A

DISK DRIVE CAPACITY

Side Access	One 3.5", 1.44MB Floppy Drive (Included) One half-height 5.25" Drive Bay
Internal	One 3.5" Fixed Disk Drive Bay Optional Drive Bay Available to Mount Horizontal Drives
Keyboard	86 Key, Detachable, 4 ft Coiled Cord AT 5-pin DIN Male Connector Separate Numeric Keypad
Front Panel Indicators	Power On Disk Activity LED
Front Panel Controls	Power On/Off System Reset
Side Panel Connectors	AT Keyboard Connector, 5-pin Female DIN DB-9P Serial Port DB-15P VGA Output Connector

DISPLAY

Size	9.5in (241.3mm) Diagonal
Type	Monochrome, Transflective Grey Scale LCD
Resolution	640 x 480 VGA
	- OR -
Size	10.3in (261.3mm) Diagonal
Type	Passive Matrix Dual Scan Color
Resolution	640 x 480 VGA
	- OR -
Size	10.4in (264.2mm) Diagonal
Type	Active Matrix Color
Resolution	640 x 480 VGA
Secondary Video Output	Simultaneous VGA Monitor Output to 1024 x 768 x 16
Dimensions (W x H x D)	15.4 x 9.7 x 8.4in (391 x 246 x 213mm)
Weight	21 lbs (9.5kg)

OPERATING ENVIRONMENT

Temperature	0 to +55°C
Humidity	0 to 95% RHNC
Shock	<8G @ 10mS
Vibration	<4G, 10-100Hz <2.75G 100-200Hz <2.0G 20-600Hz
Altitude	-200 to +15,000ft

STORAGE ENVIRONMENT

Temperature	-20 to +85°C
Humidity	0 to 95% RHNC
Shock	<30G @ 10mS
Vibration	<10G 10-100Hz
Altitude	-500 to +17,500ft
MTBF	25,000 P.O.H. Estimated

ORDERING GUIDE

Model 8436-MLCD $5869.00
Portable Enclosure, Monochrome Transflective LCD, Flat Panel Controller, Keyboard, 1.44MB Floppy Disk Drive, AC/DC Power Supply, Padded Nylon Carrying Case

Model 8436-SLCD $6259.00
Same as Above but with Passive Matrix Color LCD

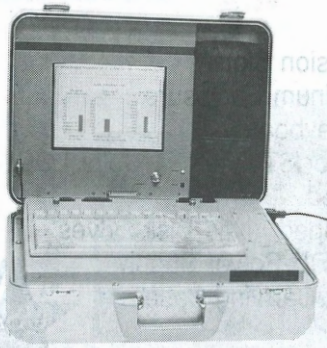
Model 8436-TLCD $10729.00
Same as Above but with Active Matrix Color LCD

See pages 8, 9 and 10 for CPU choices (Non-Video Models ONLY!)

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

2 Slot, Portable Computer

Model 8435-486



Faxline Document #:1006

Made in USA

FEATURES

- Portable, Rugged Passive Backplane System
- Choice of CPU Power
- 2 Full Length, 16-bit Expansion Slots
- 640 x 480 VGA Flat Panel Display
- Choice of Mono, Passive or Active Color
- Aluminum Case, Frame, and Card Cage
- Operating to 10g Shock, 0 to 50°C, 95% RHNC!

The 8435 Series portable computers offer portability for industrial applications. The aluminum enclosure protects the system from shock and abuse during transport. While open and operating, the internal card cage and drive mounts offer shock and vibration protection for the included 3.5", 1.44MB floppy drive and an optional 3.5", half-height hard disk. System power can be either 110VAC or 220VAC, 50/60Hz. Two full length expansion slots are available for user installed feature cards in the four slot passive backplane. Two slots are used by the CPU card and the flat panel display driver card. Pick the power for your requirements by selecting the CPU and adding your choice of hard disk drives and RAM to fill your needs.

SPECIFICATIONS

Mounting Portable
Backplane Passive
Bus Architecture ISA
Number of Slots 4 Full Length, (2 used by system)
Power Supply 85 to 264VAC Input, 47-440Hz
65W Output
+5VDC @ 6A
+12VDC @ 3A
-5VDC @ .5A
-12VDC @ .5A

DISK DRIVE CAPACITY

Front Access One 3.5" 1.44MB Floppy Drive (Included)
Internal One 3.5" Drive Bay, Vibration Dampened
Keyboard Metal Encased, 81 Keys Usable In Place or May be Removed
6' Coiled Cable
Front Panel Indicators Power On
Fixed Disk Access
Floppy Disk Access
Front Panel Controls Power On/Off
System Reset
Connectors Top access DB9 (2) for Serial Ports
Top access DB25 (1) for Printer Port
Top access DB15 (1) for External VGA Display
User Panel for Mounting Additional Connectors

DISPLAY

Size 7.75 x 6.00in (197 x 152 mm)
Type Sharp, FlatPanel, Monochrome 16 Gray Shade Display
Resolution 640 x 480 VGA
-OR-
Size 7.67 x 5.78in (195 x 147mm)
Type Color, Passive Matrix, LM64C08P
Resolution 640 x 480 VGA
-OR-
Size 8.31 x 6.24in (211 x 158mm)
Type Color, TFT, Active Matrix, LQ10DH11
Resolution 640 x 480 VGA
Dimensions (W x H x D) 18 x 13 x 6.5in (457 x 330 x 165 mm)
Weight Approximately 19 lbs (8.6 kg)

OPERATING ENVIRONMENT

Temperature 0 to +50°C
Humidity 0 to 95% RHNC
Altitude -200 to +15,000ft
Vibration 1G, 58-500Hz, 3 Axis
Shock 50G Acceleration, 11ms pulse width, 3 Axis

STORAGE ENVIRONMENT

Temperature -20 to +65°C
Humidity 0 to 95% RHNC
Altitude -200 to +15,000ft

ORDERING GUIDE

Model 8435-486S $5549.00
80486SX/33 System, 0K RAM, Mono LCD

Model 8435-4862 ..... $5599.00
80486DX2/66 System, 0K RAM, Mono LCD

Model 8435-4864 ..... $5699.00
80486DX4/100 System, 0K RAM, Mono LCD

Model 8435-486S-S ... $8049.00
80486SX/33 System, 0K RAM, STN Color LCD

Model 8435-4862-S ... $8099.00
80486DX2/66 System, 0K RAM, STN Color LCD

Model 8435-4864-S ... $8199.00
80486DX4/100 System, 0K RAM, STN Color LCD

Model 8435-486S-T... $11299.00
80486SX/33 System, 0K RAM, TFT Color LCD

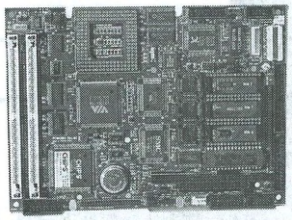
Model 8435-4862-T... $11349.00
80486DX2/66 System, 0K RAM, TFT Color LCD

Model 8435-4864-T... $11449.00
80486DX4/100 System, 0K RAM, TFT Color LCD

Single Board 486 CPU with PC/104 Expansion

Model 486PC104/66

Faxline Document #:1290



NEW!

FEATURES

- Supports 486SX/DX/DX2 Processors
- Novell NE2000 Compatible Ethernet Interface On-Board
- Local-Bus VGA/Flat-Panel Controller
- Built-In Enhanced IDE and Floppy Disk Controllers
- Two Serial and One Bi-Directional Parallel Ports
- Supports up to Six PC/104 Expansion Modules

ORDERING GUIDE

Model 486SXPC104/25 ..... **$ 1539.00**
25MHz 486SX Processor, 0K RAM

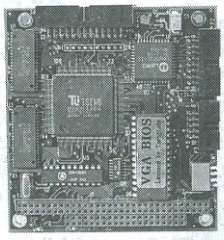
Model 486PC104/66 ..... **$ 1709.00**
66MHz 486DX2 Processor, 0K RAM

See page 60 for 72-pin Memory SIMMS

VGA/Flat Panel Controllers

Model PC104VGA

Faxline Document #:1291



NEW!

FEATURES (VGA CONTROLLER)

- 100% VGA, CGA, HGC, & MDA Compatible
- 16-Bit Data Bus
- 1MB DRAM
- Built-In Feature Connector

FEATURES (FLAT PANEL CONTROLLER)

- 65535 Video Chip
- 512kB DRAM
- Supports LCD, EL, Gas Plasma Displays, & Analog CRT
- DC-DC Converter for LCD Bias (-40 to +40V)

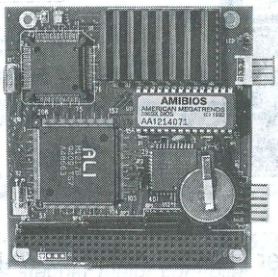
ORDERING GUIDE

Model PC104VGA ..... **$ 210.00**
Super VGA PC/104 Controller

Model PC104FPC ..... **$ 275.00**
Flat-Panel/CRT VGA Controller

PC/104 CPU Card

Model 386SX33PC104



Faxline Document #:1292

NEW!

FEATURES

- Fully PC/AT Core Compatible 33MHz 386SX CPU
- On-Board Watchdog Timer
- Real-Time Clock
- Single +5VDC Supply

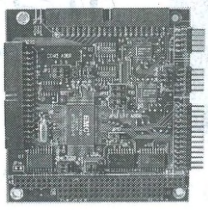
ORDERING GUIDE

Model 386SX33PC104-1 ..... **$ 390.00**
33MHz 386SX Processor, 1Meg RAM

Model 386SX33PC104-4 ..... **$ 560.00**
33MHz 386SX Processor, 4 Meg RAM

Super I/O Module

Model PC104IDEPLUS



Faxline Document #:1293

NEW!

FEATURES

- IDE (AT Bus) Hard Disk Controller Supports up to HDDs
- Floppy Controller Supports Two 360k - 1.44MB Drives
- One Bi-Directional Parallel Port
- Two Serial Ports:
  COM1: RS-232
  COM2: RS-232/422/485

ORDERING GUIDE

Model PC104IDEPLUS ..... **$ 125.00**
Board, manual

PC/104 Data Acquisition & Serial Communication Cards

EXPRESS SOURCE-BOOK FAXLINE
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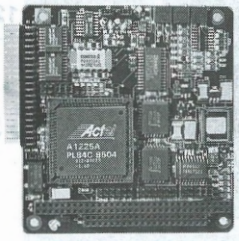
Receive a detailed FAX within Minutes!
FAX

Analog-to-Digital Converter Card

Model AIM-16



Faxline Document #:1294

NEW!

FEATURES

- 12- or 16-Bit Resolution
- 100kHz Throughput Rate
- 8 Differential or 16 Single-Ended Inputs
- Software Selectable Input Ranges
- DMA & Interrupt Operation

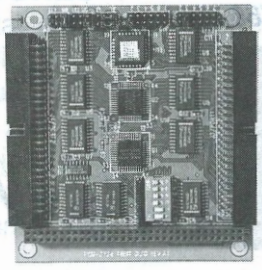
ORDERING GUIDE

Model AIM-12 ..... **$ 365.00**
12-bit card. manual, software

Model AIM-16 ..... **$ 625.00**
16-bit card, manual, software

48 Channel Digital I/O Card

Model DIO48PC/104



Faxline Document #:1295

NEW!

FEATURES

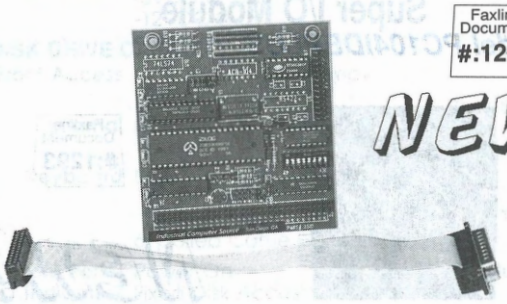
- Simulates 8255 PPI Mode 0
- Pin Compatible with PB I/O Racks
- Can Generate IRQs

ORDERING GUIDE

Model DIO48PC/104 ..... **$ 165.00**
Card, manual

Synchronous Serial Communications Cards

Model ACB104/422



Faxline Document #:1285

NEW!

FEATURES

- Versions for Either RS-232 or RS-422/485
- Utilizes the 8530 Serial Communication Controller (SCC)
- Software Developer's Toolkit Included

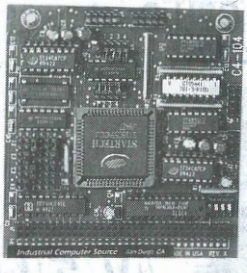
ORDERING GUIDE

Model ACB104/422 ..... **$ 299.00**
1-Port RS-422/485 card, manual, software

Model ACB104/232 ..... **$ 299.00**
1-Port RS-232 card, manual, software

1 or 4-Port Asynchronous Serial Communications Cards

Model FP104/422



Faxline Document FP – #:1288

Faxline Document SP – #:1286

NEW!

FEATURES

- Versions for either RS-232 or RS-422/485
- 16550 Compatible ST16C554 Quad UART
- Multiple Cards can Reside in the Same System

ORDERING GUIDE

Model FP104/422 ..... **$ 299.00**
4-Port RS-422/485 card, manual

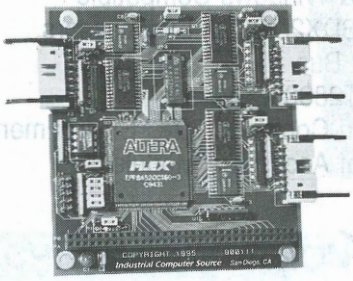
Model FP104/232 ..... **$ 299.00**
4-Port RS-232 card, manual

Model SP104/422 ..... **$ 149.00**
1-Port RS-422/485 card, manual

Model SP104/232 ..... **$ 149.00**
1-Port RS-232 card, manual

PC/104 Motion Control Cards

Model 5936

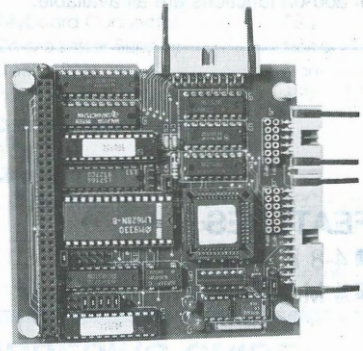


Faxline Document #:1296

FEATURES

- 1-3 Axis Stepper Motor Control (5936)
  - Programmable Velocity Profiling
  - 150,000 Pulses/Second Max Output
- 1-1½ Axis Servo Motor Control (5928/29)
  - 256 mSec Axis Update
  - 12-Bit DAC Command Signal Output (5928)
  - 8-Bit PWM Mag./Dir Signals Output (5929)
- 1-4 Axis Encoder Interface (5912-x)
  - 24-Bit Pre-Settable Counters
  - 1.2 MHz Quadrature Encoder Input Rate

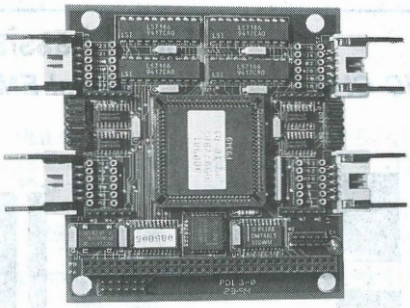
Model 5928



Faxline Document #:1297

NEW!

Model 5912



Faxline Document #:1298

ORDERING GUIDE

Model 5936-1 . . . . . $ 575.00
1-Axis stepper motor controller, board only

Model 5936-2 . . . . . $ 675.00
2-Axis stepper motor controller, board only

Model 5936-3 . . . . . $ 775.00
3-Axis stepper motor controller, board only

Model CAB5936-36 . . . $ 60.00
Cable for Model 5936, one required per axis

Model 5936DEV . . . . . $ 250.00
Software development kit, manual, MOTIONHDBK, CAB5936-36, TB50N-S

Model 5928 . . . . . $ 525.00
Analog servo motor controller

Model 5929 . . . . . $ 525.00
PWM servo motor controller

Model CAB5928/29-36 $ 60.00
Cable for Model 5928/29

Model 5928DEV . . . . . $ 275.00
Software development kit, manual, MOTIONHDBK, CAB5928/29-36, TB50N-S

Model 5929DEV . . . . . $ 275.00
Software development kit, manual, MOTINHDBK, CAB5928/29-36, TB50N-S

Model 5912-1 . . . . . $ 425.00
1 Axis encoder, board only

Model 5912-2 . . . . . $ 525.00
2 Axis encoder, board only

Model 5912-3 . . . . . $ 625.00
3 Axis encoder, board only

Model 5912-4 . . . . . $ 725.00
4 Axis encoder, manual

Model CAB5912-1/36 . $ 40.00
Cable for Model 5912-1

Model CAB5912-2/36 . $ 50.00
Cable for Model 5912-2

Model CAB5912-3/36 . $ 55.00
Cable for Model 5912-3

Model CAB5912-4/36 . $ 65.00
Cable for Model 5912-4

Model 5912DEV . . . . . $ 275.00
Software development kit, manual, MOTIONHDBK, CAB5912-4136, TAB50N-S

Model TB50N-S . . . . . $ 70.00
Terminal block for each motion card

EXPRESS SOURCE-BOOK FAXLINE
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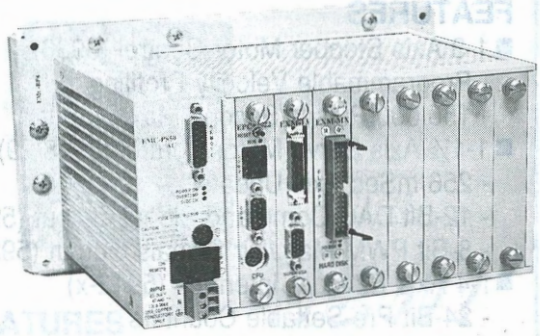
Receive a detailed FAX within Minutes!
FAX

Embedded Micro-Controllers

Model EMC Series



FEATURES

- MS-DOS & Windows Compatible
- 386SL/486DX2/486DX4 Processors
- Full 16-Bit Bus
- Mil Spec T28800, Class 3
- Convection Cooled to 60°C Environment
- Full Line of Accessory Modules

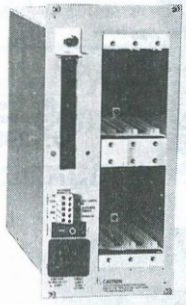
Made in USA

The EMC series is comprised of a variety of embedded system chassis with a selection of processor speeds and functional feature modules. Processors from the 386SLC through 486DX4 are available with speeds from 16Mhz to 100Mhz. The bus is a proprietary bus with mechanical features oriented towards higher vibration environments. The back-planes are available in 4 through 10 slot mdels with a selection of power supply modules. Power supplies can be added, or exchanged, to cover AC or DC input power.

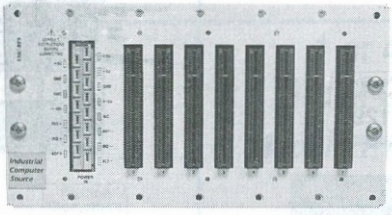
The feature modules, EXM series, provide functions required for most commercial or industrial applications. Communication ports, video controllers, network interface, digital I/O, analog I/O, a selection of storage media and an expanding variety of add-on functions are all available.

EMC Chassis and Enclosures

Model EMC-CH6AT



Model EMC-CH8



FEATURES

- 4-8 EXM Module Slots
- 4 Models to Choose From

Faxline Document #:1041

Faxline Document *#:1042

Faxline Document **#:1043

All chassis and enclosures in the EMC group provide the backplanes and power supply modules for the EPC computer boards and optional accessory feature modules. Choose the enclosure that fits your needs for floppy disk mounting, number of expansion slots and power input requirements.

COMMON SPECIFICATIONS

	DIMENSIONS (inches/mm)		WEIGHT (lb/kg)	
	Height	Width	Depth	Weight
EMC-CH8	5.5/139.8	10.2/259	6.7/170.2	4.56/2.07
EMC-CH6D	5.5/139.8	10.2/259	6.7/170.2	4.5/2.05
EMC-CH10D	5.5/139.8	13.4/340.4	6.7/170.2	5.75/2.6
EMC-CC4	5.7144.8	3.5/88.9	6.6/167.6	2.5/1.14
EMC-CH6AT	10.3/261.6	4.8/121.9	8.7/220.9	4.56/2.07

ORDERING GUIDE

Model EMC-CH8 . . . . . $ 179.00
The Basic Backplane Assembly — Eight Expansion Slots in a Card Cage and a Power Supply Location. Accepts Your Choice of Supplies, a CPU Board and up to Seven Feature Cards.

** Model EMC-CH6D . . . . $ 179.00*
An Adpatation of the EMC-CH8 that Provides a Location for a Floppy Disk Drive Module, a Power Supply, a CPU Board and up to Five Feature Modules.

*** Model EMC-CH6AT . . . $ 995.00*
A Versatile System Chassis Accepting a CPU Module, up to Five Feature Modules and a PC/AT Half Length Feature Card. For Applications Needing Features Not Supplied in EXM Modules. The Chassis also Includes a 50W Power Supply, 32K Battery Backed SRAM and a Watchdog Timer, All in a Eurocard Form Factor.

Model EMC-CH10D . . . $ 299.00
A Ten Slot Chassis Accepting a Power Supply Module, CPU Board, Floppy Drive Module and up to 9 Feature Modules.

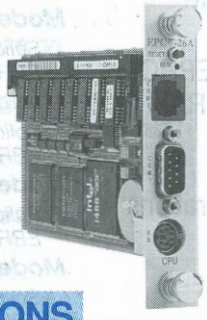
Model EMC-CC4 . . . . . $ 99.00
A Simple Four Slot Chassis Accepting up to Four Feature Modules. Requires an External +5VDC Power Supply.

Model EMC-BFP . . . . . $ 8.00
Blank Filler Panels for Unused Module Locations

Embedded Micro-Controllers (cont.)

Micro Controller CPU

Model EPC-26A



Faxline Document #:1041

FEATURES

- 0-60° C Operating Temperature
- 16, 25, 50, and100Mhz
- Fully DOS/Windows Compatible
- Full Line of Support Feature Cards

Made in USA

CPU SPECIFICATIONS

FEATURE	EPC-21	EPC-22	EPC-26A	EPC-27
Processor	386SLC	386SLC	80486DX2	80486DX4
Clock Speed	16Mhz	25Mhz	50Mhz	100Mhz
RAM Capacity	1MB On-board 5MB Optional	Same as EPC-21	4 MB 8MB Optional	4 MB 8MB Optional
I/O Interface	2 RS232 1 DB9p 1 RJ45	2 RS232 1 DB9P, 1 RJ45	1 RS232 DB9P	1 RS232 DB9P
Keyboard Connector	PS/2	Same	Same	Same
Co-processor Support	None	80387SX Included	None	On-Chip
Cache RAM	None	64K On-board	8K On-chip	16K On-chip
Power Required (Max)	+5V @ 1.5A	+5V @ 2.0A	+5V @ 1.3A	+5V @ 1.3A

Common Specifications

BIOS: Award

Operating

Temperature	0 to +60°C (*EPC-27 requires forced air cooling above 40°C ambient*)
Humidity	5-95% RH NC
Shock	30g, 11ms Duration
Vibration	0.015" P-P, 2.5g Max, Acceleration Over 5-2000Hz

Non-operating

Temperature	-40 to +85°C
Humidity	5-95% RH NC
Shock	50g, 11ms Duration
Vibration	0.030" P-P, 5.0g Max, Acceleration Over 5-2000Hz

ORDERING GUIDE

Model EPC-21 . . . . . $ 499.00
CPU, 386SL/16, 1MB RAM, SIMM Socket for Additional 4MB

Model EPC-22 . . . . . $ 789.00
CPU, 386SL/25, 1MB RAM, 80387SX Co-processor, SIMM Socket for Additional 4MB CPU, 486SX/25, 8MB RAM

Model EPC-26A . . . . . $ 1069.00
CPU, 486DX2/50, 4MB RAM

Model EPC-26A-8MB . . $ 1389.00
CPU, 486DX2/50, 8MB RAM

Model EPC-27 . . . . . $ 1299.00
CPU, 486DX4/100 4MB RAM

Model EPC-27-8MB . . . $ 1619.00
CPU, 486DX4/100, 8MB RAM

ACCESSORIES

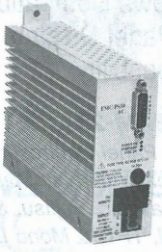
Model EPC-KBC . . . . . $ 5.00
PS/2 to AT Keyboard Adapter Plug

Model EPC-COMC . . . . $ 29.00
RJ45 to DB-9P Adapter COM Cable

Model TMS-20018-80 . . $ CALL
2MB X 18, 4MB SIMM for EPC-21, EPC-22

Power Supply Modules

Model EMC-PS50AC



Faxline Document 1041

SPECIFICATIONS

Output	50W +5VDC @ 10A +12VDC @ 0.85A -12VDC @ 0.85A
MTBF	250,000 P.O.H. @ 35°C
Operating Temperature	-15 to +60° C 5 to 95% RHNC
Storage Temperature	-62 to +85° C 5 to 95% RHNC
Vibration	0.025" P-P, Operating 0.030" P-P, Non-operating
Shock	30g, 11mS, 1/2 Sine Operating 50g, 11mS, 1/2 Sine Non-operating
Weight	2.25lb/1.02kg
Mounting	Dedicated Position in EMC Chassis

ORDERING GUIDE

Model EMC-PS50AC . . . . . $ 259.00
120/220VAC Input, 50W Output

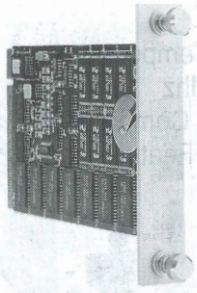
Model EMC-PS50DC12. . . . . $ 269.00
12VDC Input, 50W Output

Model EMC-PS50DC24. . . . . $ 269.00
24VDC Input, 50W Output

Model EMC-PS50DC48. . . . . $ 269.00
48VDC Input, 50W Output

Embedded Micro-Controllers (cont.)

Model EXM-2A



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FEATURES

- Combination FLASH EPROM and Battery Backed SRAM
- 0 to 60° C Operating Temperature
- Four Memory Configurations

Made in USA

ORDERING GUIDE

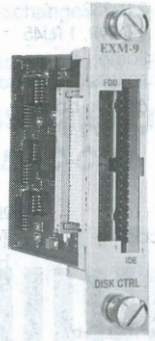
Model EXM-2A-1-128 . $ 279.00
Solid State Disk Module, 1MB FLASH EPROM, 128K SRAM

Model EXM-2A-1-512 . $ 329.00
Solid State Disk Module, 1MB FLASH EPROM, 512K SRAM

Model EXM-2A-2-512 . $ 409.00
Solid State Disk Module, 2MB FLASH EPROM, 512K SRAM

Model EXM-2A-8-1MB . $ 889.00
Solid State Disk Module, 8MB FLASH EPROM, 1MB SRAM

Storage Media Modules
Model EXM-9



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ORDERING GUIDE

Model EXM-9 ..... $ 199.00
- *IDE/Floppy Controller for External Drives*
- *2 Standard IDE Fixed Disk and 2 Standard Floppy (1.2M or 1.4M) Drives Supported. External Power Supply Required for Drives.*

Model EMC-FDM ..... $ 309.00
- *Internal Floppy Disk Drive Module for EMC-CH6D Chassis*
- *Includes Drive, Controller, Serial/ Parallel Port*

Model EXM-FDM..... $ 159.00
- *External 3.5" Floppy Drive with Cable to EXM-16, EXM-HDxx or EXM-SSDx*

Model EXM-MX80..... $ 479.00
- *80MB IDE Fixed Disk Module, Controller Logic*
- *External Floppy Drive Controller/ Connector*
- *+5VDC Only Operation*

Model EXM-MX200.... $ 729.00
- *200MB IDE Fixed Disk Module, Controller Logic*
- *External Floppy Drive Controller/ Connector*
- *+5VDC Only Operation*

FEATURES

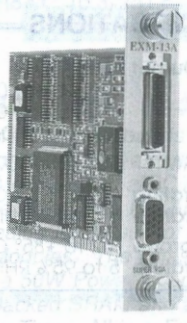
- Floppy and Hard Disk Controllers and Drives
- IDE, SCSI-2 and PCMCIA Drives
- To 200MB Capacity

Model EXM-HD80 ..... $ 469.00
Model EXM-HD200 .... $ 679.00
- *Same as above Drive Modules with NO Floppy Controller/Connector*

Model EXM-16 ..... $ 349.00
- *SCSI-2 and Floppy Controller*
- *Adaptec 1520/1522 Compatible, ASPI*

Model EXM-17 ..... $ 229.00
- *PCMCIA Card Adapter*
- *Type I or II PCMCIA 2.0 Cards*
- *Front Panel Access for Cards*
- *Supports SRAM, FLASH and EPROM Memory Cards and Type II I/O cards*

Video Adapters
Model EXM-13A



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ORDERING GUIDE

Model EXM-13A ..... $ 259.00
Model EXM-13A-2MB.. $ 349.00
- *SVGA Card to 640 x 480 x 256, 1024 x 768 x 256 (1MB)*
- *SVGA Card to 640 x 480 x 256, 1280 x 1024 x 256 (2MB)*
- *Analog VGA*
- *512KB RAM*
- *Front Panel DB-15S Connector*
- *Windows Driver*
- *Flat Panel Display Controller Capability with Front Panel Connector*

Model EXM-14 ..... $ 1289.00
- *Motion Video Capture Module*
- *RS170/RS343RGB Inputs*
- *SVHS, NTSC, PAL, SECAM, RS170A Formats*
- *VGA (DB-15S) Output Connector*

Model EXM-14CBL .... $ 109.00
Cable, EXM-14 to EXM-13A

FEATURES

- SVGA Compatibility
- Video Capture & Presentation
- Windows Compatibility
- Flat Panel Display Compatibility

Model EXM-23 ..... $ 339.00
- *Flat Panel Controller*
- *Yamaha Display Master Equivalent*
- *Panasonic, Fujitsu, & Sharp Models*
- *STN, TFT, & Mono LCD Panels*
- *Front Panel DB50M for Customer Wiring Interface*
- *To 800 x 600 x 64 gray shade; 1280 x 1024 x 16 gray shade*
- *To 640 x 480 x 256 - STN/TFT Color LCD*
- *Cable to Flat Panels Not Included*

Communication Interface Modules

ORDERING GUIDE

Model EXM-4 ..... $ 479.00
- EEE Interface
- National Instruments GPIB-PCII Compatible
- Front Panel IEEE-488 Connector
- Software Drivers Not Included

Model EXM-7 ..... $ 289.00
- 2 RS232 Ports (COM3&4), DTE
- Front Panel Dual DB-9P Connectors

Model EXM-8 ..... $ 289.00
- 2 RS422 Ports
- Zilog 8530 Compatible
- Front Panel Dual DB-9S Connectors
- RX/TX LEDs

Model EXM-10A ..... $ 259.00
- Ethernet Adapter
- Both Thick and Thin
- Western Digital WD8003EB Compatible
- TR/CA LEDs

Model EXM-18

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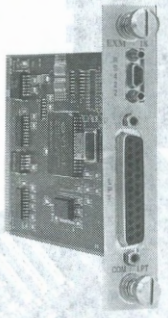

Model EXM-18-232.... $ 219.00
- 1 RS232
- 1 Parallel Ports
- Front Panel MICRO DB-9S and Standard DB25S Connector

Model EXM-18-422.... $ 219.00
- 1 RS422
- 1 Parallel Ports
- Front Panel MICRO DB-9S and Standard DB25S Connector

FEATURES
- IEEE-488, RS232, RS422, Ethernet Models
- Industry Standard Compatibility

Model EXM-18-CBL ... $ 19.00
Micro-D to DB-9 Adapter Cable

Model EXM-29 ..... $ 279.00
- Fast Serial I/O Controller - RS422/485
- FASTCOMM/422 Equivalent
- Dual DB9P Front Panel Connectors
- Switch on Termination Resistors

Model EXM-31 ..... $ 389.00
- 14400 Baud Modem Interface, V.42
- Hayes Smartcom Compatible
- FCC Part 68 Registered
- RJ11 Front Panel Jack

Model EXM-SSD

The EXM-SSD is an EXM expansion module containing an IDE compatible solid state Flash ROM Drive and a floppy disk controller for external floppy drives. A front panel connector is provided for the external floppy disk interface and will control up to two drives of 3.5" or 5.25". No special Flash File System drivers are required. This module functions as an IDE drive within the EMC system. It is operating system independent.

FEATURES
- Seagate Sundisk Solid State Flash Drive
- 4MB, 10MB or 40MB Capacity
- No Device Drivers Required
- Floppy Disk Controller

Not compatible with EXM-9 installed

ORDERING GUIDE

Model EXM-SSD4 ..... $ 679.00
4MB Flash ROM Drive

Model EXM-SSD10 .... $ 1049.00
10MB Flash ROM Drive

Model EXM-SSD40 .... $ 2419.00
40MB Flash ROM Drive

EMBEDDED CONTROLLERS

Input/Output Modules

Model EXM-21

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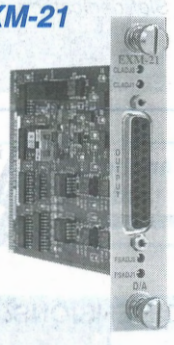


ORDERING GUIDE

Model EXM-11 ..... $ 699.00
- Hi-Speed Counter
- 100nS Resolution
- 8192 Count FIFO Buffer
- 28-bit Count Value with Accuracy of 100ppm
- 10Mhz Counter Clock
- Signal/Gate BNCs

FEATURES
- A/D, D/A, Digital Inputs and Outputs
- Industry Standard Software Compatibilities

Model EXM-12 ..... $ 259.00
- Buffered Prototyping Card
- 3.25" x 2.5" Breadboard
- 100mil Centers, for User Development
- All EXM Bus Interface Logic Installed.

Model EXM-19-24..... $ 219.00
- 24 Bit Digital I/O
- Configurable as Either Input or Output
- 82C55 TTL
- DIO24-P Compatible
- DB-37P Front Panel Connector

Model EXM-20 ..... $ 619.00
- 16 Single Ended or 8 Differential Inputs
- 12 bit Resolution
- DMA and Interrupt Operation
- 82C54 Counter Timer
- 4 Digital In, 4 Digital Out Bits
- Programmable Gain Amplifier
- 10V, 5V, 2.9V and 1.25V Input Ranges
- AIO16-P Compatible

Model EXM-21 ..... $ 259.00
- 2 Channel D/A
- 12 bit Resolution
- 5V Internal or 10V External Reference
- Unipolar and Bipolar Voltage Output
- 4-20mA Current Loop Outputs
- AD7548 D/A Converter
- AOB2-P Compatible

EISA & PCI Passive Backplanes

Multiple PCI Slot Backplanes

Model 15018-01

FEATURES

- Conforms to PICMG Standards
- Incorporate Digital PCI to PCI Bridge
- ISA and PCI Expansion Slots
- Bus Power Check™ Circuitry
- Three Standard Models
- Custom Models Available

DIMENSIONS: (W x D)

18 Slot	16.8" x 9.7" (427 x 244mm)
13 Slot	12.8" x 9.7" (325 x 244mm)
8 Slot	8.8" x 9.7" (244 x 244mm)

ORDERING GUIDE

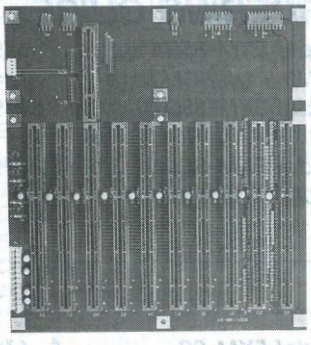
Model 15008-01 . . . . . $ 529.00
3 ISA, 1 CPU and 4 PCI Slots

Model 15013-01 . . . . . $ 599.00
6 ISA, 1 CPU and 6 PCI Slots

Model 15018-01 . . . . . $ 669.00
11 ISA, 1 CPU and 6 PCI Slots

EISA/ISA Backplanes

Model 13003-3FF



Made in USA

FEATURES

- Conforms to PCXI901
- 10 and 15-Slot Models
- All EISA Slots; 6 Bus Master
- Can Be Jumpered for ISA CPUs
- 6 Layer Construction
- Bus Power Check™ Circuitry

DIMENSIONS: (W x D)

20 Slot	16.8" x 9.7" (427 x 244mm)
15 Slot	12.8" x 9.7" (325 x 244mm)
10 Slot	8.8" x 9.7" (244 x 244mm)

ORDERING GUIDE

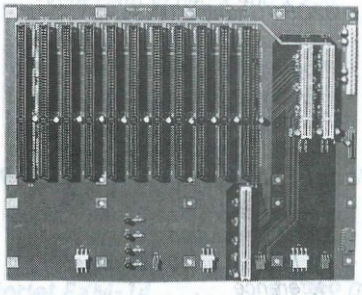
Model 13003-3FF . . . . . $ 329.00
10 Slot EISA, Passive Backplane (1 Slot dedicated to CPU)

Model 13004-7FFF. . . . . $ 449.00
15 Slot EISA Passive Backplane (1 Slot dedicated to CPU)

Model 13020-FFFFF . . . . $ 629.00
15 EISA, 5 ISA Passive Backplane (1 Slot dedicated to CPU)

PCI/ISA Backplanes

Model 14013-01



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FEATURES

- 2 PCI Local Bus Expansion Slots
- Conforms to PICMG Standards
- High Noise Immunity Construction
- Accepts CPU with PCI Control in Dedicated Slot
- Also Accepts Standard ISA Bus CPU's

DIMENSIONS: (W x D)

18 Slot	16.8" x 10.12" (427 x 257mm)
13 Slot	12.8" x 10.12" (325 x 257mm)
8 Slot	8.8" x 10.12" (244 x 257mm)

ORDERING GUIDE

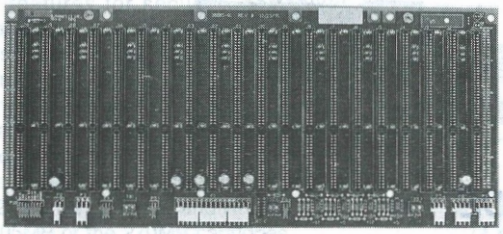
Model 14008-01 . . . . . $ 379.00
5 ISA, 1CPU and 2 PCI Expansion Slots

Model 14013-01 . . . . . $ 429.00
10 ISA, 1 CPU and 2 PCI Expansion Slots

Model 14018-01 . . . . . $ 529.00
15 ISA, 1 CPU and 2 PCI Expansion Slots

ISA Passive Backplanes

20-Slot ISA Backplane



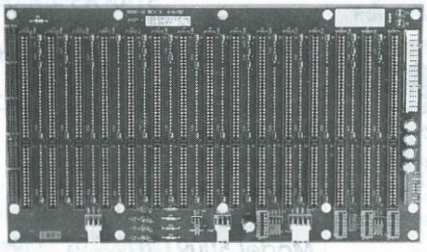
FEATURES
- High Quality Backplane
- Termination Resistor Sockets
- Guaranteed to Work w/the New High Speed CPU's
- 6 Layer PCB
- Power Indicating LED's
- 20 AT Slots
- Exclusive Bus Power Check™ Circuitry

DIMENSIONS: (W x D)
16.8" x 7.5"
(427 x 190mm)

Made in USA

ORDERING GUIDE
Model 11020-FFFFF . . . . . $ 295.00

15-Slot ISA Backplane



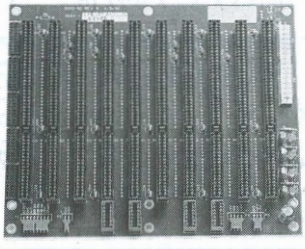
FEATURES
- High Quality Backplane
- Termination Resistor Sockets
- 4 Layer, Low Capacitance PCB
- 15 AT Slots
- Exclusive Bus Power Check™ Circuitry

DIMENSIONS: (W x D)
12.8" x 7.45"
(325 x 189mm)

Made in USA

ORDERING GUIDE
Model 11004-7FFF . . . . . $ 185.00

10-Slot/8-Slot ISA Backplanes



FEATURES
- Termination Resistor Sockets
- 4 Layer Low Capacitance
- Power Indicating LED's
- Exclusive Bus Power Check™ Circuitry

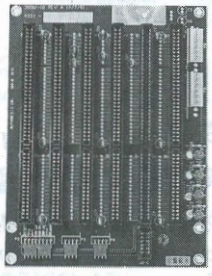
DIMENSIONS: (W x D)
10 Slot 8.8" x 7.3"
(224 x 185mm)
8 Slot 7.2" x 7.45"
(183 x 189mm)

Special slot configurations available, call for quote.

Made in USA

ORDERING GUIDE
Model 12003-3FF (10 Slot) . . . . . $ 150.00
Model 11011-FF (8 Slot) . . . . . $ 125.00

6-Slot/4-Slot ISA Backplanes



FEATURES
- 4 Layer Low Capacitance
- Exclusive Bus Power Check™ Circuitry

DIMENSIONS: (W x D)
6 Slot 5.6" x 7.45"
(142 x 189mm)
4 Slot 3.6" x 7.45"
(91 x 189mm)

Made in USA

ORDERING GUIDE
Model 12010-3F (6 Slot ISA) . . . . . $ 110.00
Model 10206-0F (4 Slot ISA) . . . . . $ 95.00

Floppy Disk / Hard Drives, Memory SIMMS & Co-Processors

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FAX

Memory SIMMS & Co-Processors

Model TMS-1000-60 . . . $ CALL
1MB x 9, 1MB, 60nS

Model TMS-4000-60 . . . $ CALL
4MB x 9, 4MB, 60nS

Model TMS-51236-70 . . $ CALL
512K x 36, 2MB, 70nS, PS/2 Style

Model TMS-10036-70 . . $ CALL
1MB x 36, 4MB, 70nS, PS/2 Style

Model TMS-20036-70 . . $ CALL
2MB x 36, 8MB, 70nS, PS/2 Style

Model TMS-40036-70 . . $ CALL
4MB x 36, 16MB, 70nS, PS/2 Style

Model TMS-80036-70 . . $ CALL
8MB x 36, 32MB, 70nS, PS/2 Style

Model 80387SX . . . . . $ CALL
Intel, For 80386SX, 16-25Mhz

Model 80387SX-33 . . . . $ CALL
Intel, For 80386SX, 33Mhz

Model 80387DX . . . . . $ CALL
Intel, for 80386DX, 16-33Mhz

Due to international market fluctuations, please call to verify RAM, Co-Processor prices when placing your order.

Teac Floppy Disk Drives

Model FD505

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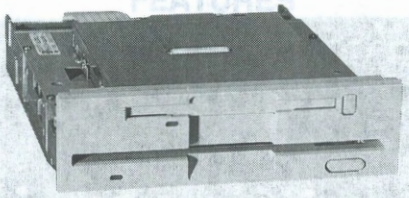

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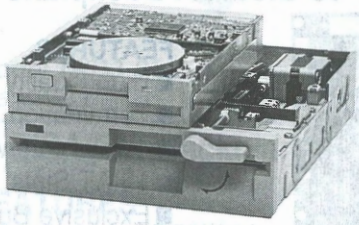
Model FD-505 . . . . . $ 199.00
Teac, 3.5"/5.25" Combo Floppy Drive, Interfaces As Two Drives, A: & B:

Floppy Drives

Model FD1.4M



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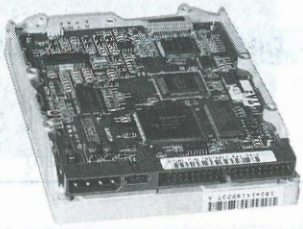
Model FD-2.8M . . . . . $ 139.00
Teac, 3.5", 2.88MB, Standard Floppy Hardware Connect, Requires Supporting Controller and BIOS

Model FD-1.4M . . . . . $ 79.00
Teac, 3.5", 1.44MB

Model FD-1.2M . . . . . $ 79.00
Teac, 5.25", 1.2MB

Model 50091-01 . . . . . $ 13.00
Floppy Drive/Controller cable, 2 drive, 24"

IDE Hard Disks



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ORDERING GUIDE

***Model QM30850TRA . . . $ 389.00**
Quantum Trailblazer, 850MB, 14mS, 1"

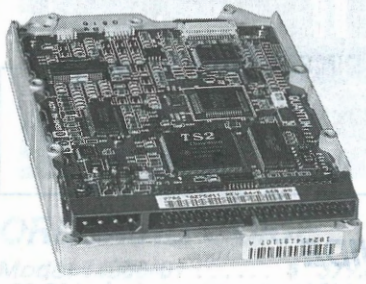
****Model QM31080FBA . . . $ 549.00**
Quantum Fireball, 1080MB, 12mS, 1"

Model WDAC31000 . . . $ 459.00
Western Digital Caviar, 1038MB, 10mS, 1"

ACCESSORY

Model 50090-01 . . . . . $ 13.00
Internal cable, IDE Controller to 2 IDE drives, 24"

SCSI Fixed Disk Drives; Fast, SCSI Drives



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ORDERING GUIDE

***Model QM30850TRS . . . $ 449.00**
Quantum Trailblazer, 850MB, 14mS, 1", SCSI-2

****Model QM31080FBS . . . $ 725.00**
Quantum Fireball, 1080MB, 12mS, 1", SCSI-2

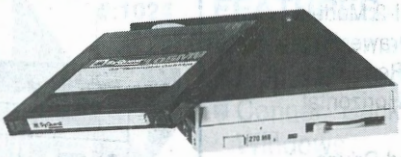
*****Model XP31070S . . . . . $ 1149.00**
Quantum Atlas, 1070MB, 8.5mS, 1", SCSI-2

*****Model XP32150S . . . . . $ 1525.00**
Quantum Atlas, 2150MB, 8.5mS, 1", SCSI-2

Removable Media "Fixed" Disk Drives

The SQ3270 drive/cartridge assemblies offer features for security, portability, upgradability and storability of data. The 3.5" drives mount in standard drive mounting assemblies. The data cartridge is easily removed for storage. Throughputs of 4MB/Sec are possible in Burst Mode and sustained throughputs of 2MB/sec are typical with an average seek time of 13.5msec. The SQ3270 drive can read and write to either the 105MB or the 270MB cartridges.

Model SQ3270A



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FEATURES

- 3.5" ATA/IDE/ **OR** SCSI-2 Models
- 105MB and 270MB Cartridges
- 100,000 Hour MTBF
- "Look Ahead" Caching Buffer

SPECIFICATIONS

Interface SCSI-2 or IDE Models
Capacity 105MB and 270MB Cartridge Models
Average Access Time 13.5ms

DATA TRANSFER RATE

Read 2MB/sec - 270MB Cartridge
1MB/sec - 105MB Cartridge
Write 900KB/sec - 270MB Cartridge
500KB/sec - 105MB Cartridge

Buffer Size 128kB
Insertion Cycles 20,000 Min.
MTBF 100,000 P.O.H.
Non-Recoverable Data Errors < 1 in 10^{12}
Size (W x L x H) 4" x 5.9" x 1" (102 x 150 x 25mm)

Power Requirements 0.7A @ +5VDC - Active Read/Write
0.9A @ +5VDC - Seek
0.12A@ +5VDC - Sleep, Spindle off
Programmable Power Modes Sleep
Stand-by
Idle
Active

SHOCK

Operating 3G
Non-Operating 80G's without Media Cartridge

VIBRATION

Operating 0.030"(Double Amplitude), 5-10Hz
0.3G's (Peak to Peak), 11-300Hz
Non-Operating 0.40"(Double Amplitude), 5-10Hz
4.0G's (Peak to Peak), 11-300Hz

OPERATING MODES

DOS/Windows 3.X Removable Media Driver Included with Drive
Drive Bootable, Removable
OS/2 SCSI Drive *.add" Driver Required for Specific SCSI Controller
Drive Not Bootable, Non-Partitionable, Standard File System Only
Syquest Driver Available to make Drive Bootable
OS/2 IDE Drive Drive Bootable, NOT Removable
NT SCSI Drive Specific Controller Driver Required
Drive NOT Bootable, NOT Removable, Non-Partitionable
NT IDE Drive Drive Bootable, NOT Removable

ORDERING GUIDE

** Model GSI18 controller supports removable media for this drive.*

Model SQ3270A . . . . . $ 599.00
270MB Removable Media Drive, IDE, Drivers for DOS/Windows 3.X

Model SQ3270S. . . . . $ 699.00
270MB Removable Media Drive, SCSI-2, Drivers for DOS/Windows 3.X

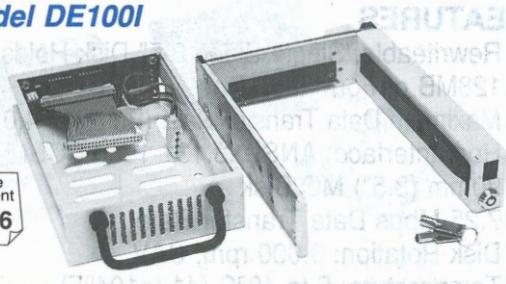
ACCESORIES

Model SQ105. . . . . $ 95.00
105MB Media Cartridge

Model SQ327. . . . . $ 129.00
270MB Media Cartidge

Removable Metal Drive Mounts Convert Standard Fixed Disk to Removable

Model DE100I



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FEATURES

- Removable 3.5" Winchester Drive Storage
- Compact & Easy to Install
- Supports SCSI or AT/IDE Interface
- Mounts in any 5.25" Half-height System Slot
- Key lock Provided
- Metal Construction Frame/Carrier

ORDERING GUIDE

Model DE100I-S. . . . . $ 195.00
SCSI receiving frame, carrier

Model DE100I-AT . . . . . $ 195.00
AT/IDE receiving frame, carrier

Model DE100I-CS . . . . . $ 95.00
SCSI carrier only

Model DE100I-CA . . . . . $ 95.00
AT/IDE carrier only

Model DE100I-RS . . . . . $ 135.00
SCSI receiving frame only

Model DE100I-RA . . . . . $ 135.00
AT/IDE receiving frame only

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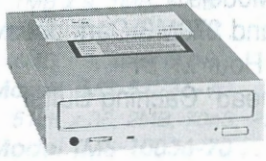
SONY™ CD-ROM Drive

Model CDU76



FEATURES

- IDE & SCSI-2 Models
- CD-ROM Drawer
- No Caddy Required
- Vertical or Horizontal Mounting
- Quad Speed Drives
- To 410KB Transfer rate (SCSI-2)
- 100,000 P.O.H. MTBF
- 5 to 50°C Operation

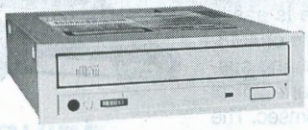
ORDERING GUIDE

Model CDU76S ..... **$ 309.00**
SCSI-2 Interface Internal CD-ROM Drive

Model CDU76E ..... **$ 289.00**
IDE Interface Internal CD-ROM Drive with Drivers and Controllers

Toshiba CD-ROM Drive

Model XM3601BS



FEATURES

- QuadSpeed
- Horizontal or Vertical Mount
- Caddy Not Required
- SCSI-2

NEW!

Faxline Document #:1299

ORDERING GUIDE

Model XM3601BS ..... **$ 415.00**
SCSI-2 CD-ROM Drive, No Caddy Required

SONY™ Half-Height Re-writeable Magneto Optical Disk Drive

Model SMO-F531

Faxline Document #:1090

FEATURES

- 1.3GB/620MB Re-Writable Disk Optical Disk Drive
- 40mS Average Seek Time (1/3 Stroke)
- SCSI-2 Interface
- .94 to 1.8MB/Sec Sustained Throughput to 5MB/Sec Burst
- Operating Shock to 30G
- Supports Multifunction Features - ROM/MO

ORDERING GUIDE

Model SMO-F531 ..... **$ 2759.00**
SCSI-2 SMO, Half-height Disk Drive

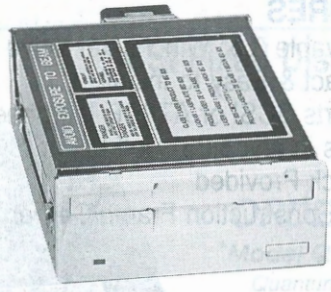
ACCESSORIES

Model EDM-1301 ..... **$ 169.00**
1.2GB Re-writable Optical Disk Media for DOS/Windows

Model EDM-1DA1S .... **$ 149.00**
549MB Re-writable Optical Disk Media for DOS/Windows

SONY™ 3.5" Half-Height MO Disk Drives with High-Speed Access and Data Transfer

Model SMO-E301F



FEATURES

- Rewriteable, Single-Sided 3.5" Disk Holds up to 128MB of Formatted Data
- Maximum Data Transfer Rate (Burst) of 4.0 MB/sec.
- Host Interface: ANSI X3.131-1986 SCSI
- 90mm (3.5") MO Disk
- 7.25 Mbps Data Transfer Rate
- Disk Rotation: 3,000 rpm, CAV
- Temperature: 5 to 40°C (41 to104°F)
- Relative Humidity: 10 to 85%

ORDERING GUIDE

Model SMO-E301F .... **$ 1495.00**

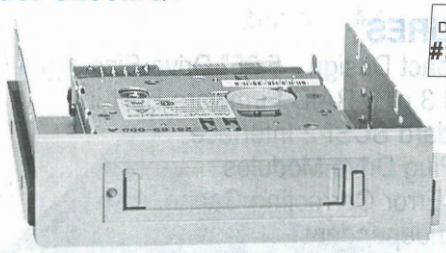
ACCESORIES

Model EDM-128 ..... **$ 65.00**
128 MB MO Disk Media

Model P301INT ..... **$ 15.00**
Mounting bracket/bezel for internal 5.25" bay

Conner C250MQT Tape Backup

Model C250MQT



Faxline Document #:1024

FEATURES

- QIC80 Format Tape Drive
- Floppy Drive Interface
- Conner "Backup Basic" Included for DOS/ Windows
- Installs in Half Height Bay

ORDERING GUIDE

Model C250MQT ..... $ 258.00
Tape Drive, "Backup Basic" Software,

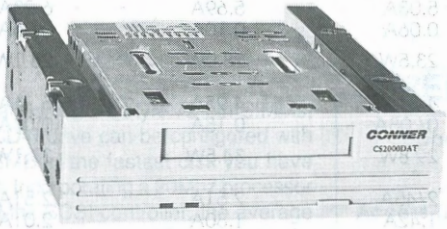
ACCESSORIES

Model DC2120F ..... $ 21.00
Formatted tape

Model NOVI2001 ..... $ 149.00
Backup software for OS/2

Conner DAT Tape Backup

Model ST2000I



FEATURES

- 4mm DAT Tape Drives
- 2GB and 4GB Capacities
- Unix, Windows NT, Novell, DOS Compatible
- SCSI Interface

These DAT Internal Drives are advanced, fully integrated Digital Data Storage (DDS) tape drives designed specifically for the rigors of data storage environments. With their 3.5" drive mechanism and 5.25" half height form factor, embedded SCSI controller and VLSI components, they provide un-matched performance and reliability in a design for the 1990s.

ORDERING GUIDE

Model ST2000I ..... $ 1760.00
2GB Capacity Tape Drive, SCSI Interface, W/O Controller With Drivers for SCO Unix

Model ST4000I ..... $ 1950.00
4GB Capacity Tape Drive, SCSI Interface, W/O Controller With Drivers for SCO Unix

ACCESORIES

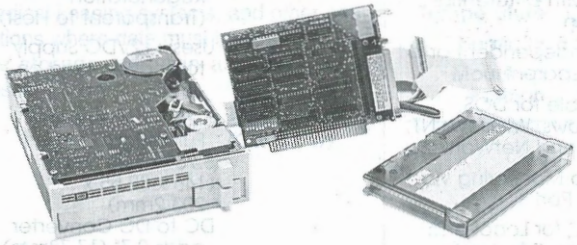
Model SYTOS+ ..... $ 125.00
Back Up Software for DOS

Model BW10SB ..... $ 79.00
Back Up Software for Windows

Model NCSO211 ..... $ 195.00
Back Up Software for Novell

Conner 500MB Data Cartridge Tape System

Model 7251QI



Faxline Document #:1169

FEATURES

- 150MB/250MB on Standard Tapes
- Plus Advanced Data Compression for 500MB on Extended Length Tape
- Model 7000 Drives Support DOS and SCO UNIX, as well as Major Networks Including Novell, 3Com and TOPS
- Irwin's EzTape® Software for DOS

ORDERING GUIDE

Model 7251QI ..... $ 760.00
Internal AT System includes drive, controller, installation kit, and software

ACCESSORY

Model 600XL/1 ..... $ 43.00
1000 feet 1/4" unformatted tape cartridge

Self Contained RAID Systems
Size of One Full Height Drive

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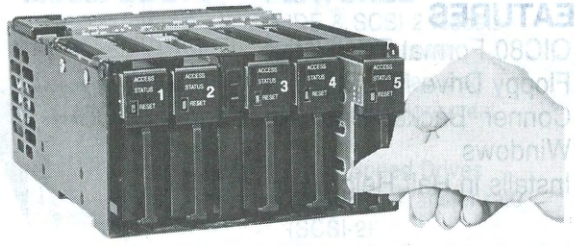
Receive a detailed FAX within Minutes!
FAX

Model MICRO 2000 RAID Array



Faxline Document #:1056

NEW!

Far better than software solutions, the Micro Array 2000 permits you to setup your own RAID array with a standard SCSI-2 controller card. The RAID array itself is the size of a standard 5.25" full-height drive. With the Industrial Computer Source 6531-RMDB up to four 2GB arrays can be installed in a single rack chassis.

The Micro Array 2000 is a scalable product meaning you can configure the same base chassis with 3, 4 or 5 drive modules to get 1, 1.5 or 2MB of RAID level 3 or level 5 data security. The same base drive module, 524MB capacity, is used in all cases. The firmware includes a 33MHz RISC processor to obtain a maximum 10MB throughput. The 2MB of on-board cache includes 22 bit error correction coding.

The included software, SQW00053, provides remote monitoring and disk diagnostics under DOS, Windows 3.x, or Windows NT.

FEATURES

- Compact Design - 5.25" Drive Size
- Level 3 or 5 RAID Firmware Built-in
- Standard SCSI-2 Interface
- Hot Plug Drive Modules
- 2MB Error Correcting Cache
- O/S Independent

SPECIFICATIONS

	MAS10050	MAS15054	MAS20055
Fault Tolerant Capacity	1.0GB	1.5GB	2.0GB
Max. External Capacity	7GB	10.5GB	14GB
Drive Capacity	524MB	524MB	524MB
Start-up Power (Without Converter)	27.3W	31.3W	33.7W
+5V	5.03A	5.69A	6.23A
+12V	0.06A	0.10A	0.06A
Operating Power (Without Converter)	23.5W	28.0W	28.1W
+5V	4.27A	4.95A	5.16A
+12V	0/.08A	0.15A	0.07A
Start-up Power (With Converter)	29.8W	34.5W	37.1W
+5V	2/45A	2.51A	2.51A
+12V	1.42A	1.80A	2.01A
Operating Power (With Converter)	24.9W	30.5W	27.4W
+5V	2.72A	2.78A	2.74A
+12V	0.89A	1.34A	1.09A

COMMON SPECIFICATIONS

Array Engine Array Optimized 32 bit RISC Processor

Max Data Transfer Rate 10MB/s

Cache 2MB Fault Tolerant Fast Store with Error Correcting Code (22bit)

Interface SCSI-2 Command Set, Single Ended Termination with Differential Option

Operating Systems O/S Independent and Transparent

Monitor Programs Available for DOS, Windows, Windows NT, OS/2 and NetWare

Remote Monitoring Dial-up Monitoring via Serial Port

Serial Port RS232C for Local and Remote (Modem) Monitoring

Software Functionality Performance Monitor, Status Monitor, Remote Monitor, Logical Drives Partitioning and Cache Optimization

RAID Levels 3 or 5

Drives Hot Plug, User Replaceable

Data Rebuild Automatic Data Regeneration (Transparent to Host)

DC to DC Converter Uses +12VDC Supply to Reduce load on +5VDC Supply

Dimensions (W x H x D) 5.25" Form Factor, Full-Height 5.75" x 3.25" x 8" (146 x 82.55 x 203.2mm) DC to DC Converter adds 0.7" (17.78mm) to Depth

ORDERING GUIDE

Model MAS10050 . . . . . $5509.00
1GB Scalable Array with 3 Drive Modules

Model MAS15054 . . . . . $6749.00
1.5GB Scalable Array with 4 Drive Modules

Model MAS20055 . . . . . $7999.00
2GB Scalable Array with 5 Drive Modules

Model MAD10050 . . . . . $5709.00
1GB Scalable Array with 3 Drive Modules and DC Converter

Model MAD15054 . . . . . $6849.00
1.5GB Scalable Array with 4 Drive Modules and DC Converter

Model MAD20055 . . . . . $8199.00
2GB Scalable Array with 5 Drive modules and DC Converter

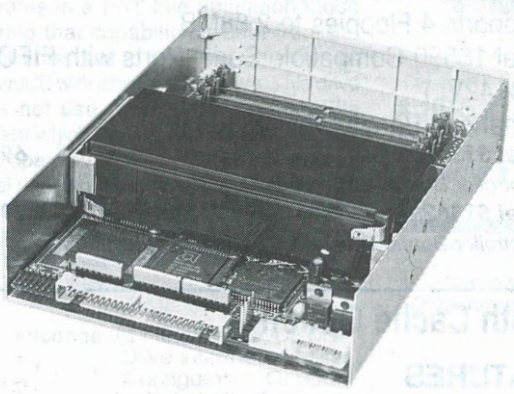
ACCESSORIES

Model MAK00540 . . . . . $1249.00
Spare 540MB Drive Module

Model SOW00053 . . . . . $1999.00
(Additional Licenses) Software Monitor Package for Diagnostics, Remote Monitoring, Alarms and Partitioning

DRAM 0.1mS Drive

Model PCSSD-0



FEATURES

- Solid State Disk Drive
- Battery Backed DRAM
- Disk Access Time of 0.1ms
- 10MB/Second Throughput
- Up to 256MB Capacity in Half-Height Drive Size
- Standard 72 pin SIMMs
- Standard SCSI-2 Interface

Made in USA

Using standard PS/2 style 72 pin SIMMs, the PCSSD-0 drive can be configured with up to 256MB of the fastest disk you have ever seen. Incorporating a 20Mhz processor and a 40Mhz SCSI controller, the average disk access time is rated at 0.1milliseconds. Track seek delays and rotational latencies are eliminated because there is no rotating disk platter to find the correct sector on. The drive includes a battery for backup of the data in the drive at any time and will provide backup time of up to 12.3 hours with standard DRAMs. Data stored to the drive is corrected on the fly with a self correcting function.

The use of the SCSI-2 interface makes the drive compatible with a variety of platforms from Apple through RISC and is operating system independent. Applications include high speed data base disk, files server and LAN swap file disk for Unix systems, color reprographic systems, medical imaging systems, and other applications where data must be available from the storage media in as little time as possible.

SPECIFICATIONS

Capacity	32MB through 256MB, 32MB Increments, Formatted
Access Time	0.1 ms
Throughput Rate	10MB/Second
Memory Specifications	PS/2 Style, 72 pin SIMMs with Fast-Page 16Mbit DRAMs, 70 nanosecond Access, 32ms Refresh
SIMMs Supported	8MB x 36 (32MB), 16MB x 36 (64MB). SIMM Sizes May Not be Mixed. Up to 8 SIMMs May be Installed
Dimensions (W x L)	Height: Half-Height, 1.65"(42mm) 5.75" x 8.2" (146 x 208mm)
Weight	11.4lbs (5.2kg)
Operating Temperature	With Battery Charger 0° to 40°C,
Humidity	5-90%, RHNC
Mounting Position	Any Position Except Front Panel Down
Interface Sustained	Fast SCSI-2, 8 bit Up to 10MB/Second,
Transfer Rate	Synchronous Up to 7MB/Second, Non-Synchronous
Block Size	512Bytes
Connector Type	50 Pin Header, Internal SCSI
Power Requirement	+5VDC @ 1.5A Battery Charger Input 0.14A @ 120VAC
Data Reliability	64 bit Modified Hamming Code Correction, Detects and Corrects All Single Bit, Detects All Double- and Some Triple-bit Errors

Battery Backup Capacity	**Size**	**Std DRAM**
	32B	12.3 Hours
	64MB	11.3 Hours
	128MB	9.7 Hours
	256MB	7.5 Hours

Battery Life	7 Years, Sealed Lead Acid

ORDERING GUIDE

Model PCSSD-0 ..... ***$1595.00***
Includes battery, on-board charger, no DRAM

ACCESORY

Model TMS-80036-70 ..... ***$ CALL***
8M x 36 (32MB), 70nS SIMM

Drive Controllers

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Receive a detailed FAX within Minutes!
FAX

IDE Drive Controllers

Model S1342VL

Faxline Document #:1062

FEATURES

- VESA, EISA, ISA, or PCI
- Supports 4 IDE Drives
- Supports 4 Floppies to 2.88MB
- Dual 16550 Compatible Serial Ports with FIFO (S3142VL)
- Enhanced Parallel Port (S1342VL)

ORDERING GUIDE

Model EISA-IDE . . . . . $ 175.00
Dual Fixed Disk, Dual Floppy Disk Controller, EISA

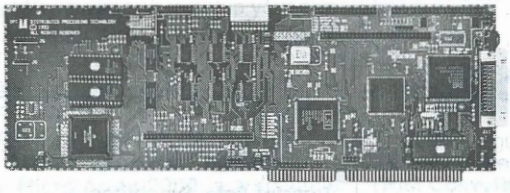
Model IDEPLUS . . . . . $ 69.00
Two IDE, Two Floppy Drive Controller, 2Serial Ports, 1 Parallel Port.

Model S1342VL . . . . . $ 69.00
Controller Board, VESA Bus, Dual Channel IDE

Model S1362 . . . . . $ 29.00
Controller Board, PCI Bus, Dual Channel IDE

DPT SCSI-2 Controllers with Cache Option

Model PM2021/95



FEATURES

- Add up to 64MB of On-Board Disk Cache Memory
- Add-On RAID 0,1 and 5 Option
- DOS, Unix, Windows NT Compatible
- Kits Include Adapter Storage Manager Software, SCSI Cable (2' Int), Device Drivers and Manuals
- Supports Up To 7 SCSI-1 and Fast SCSI-2 Disk, Tape, Optical, CD-ROM, WORM & Removable Disks

ORDERING GUIDE

Model PM2021/90 . . . . $ 285.00
SCSI-2 Controller, ISA Bus

Model PM2021/95 . . . . $ 310.00
SCSI-2 and Dual Floppy Controller, ISA Bus

Model PM2022/90 . . . . $ 470.00
SCSI-2 Controller, EISA Bus, 68000 Processor

Model PM2022/95 . . . . $ 495.00
SCSI-2 and Dual Floppy Controller, EISA Bus, 68000 Processor

Model PM2122/90 . . . . $ 595.00
High Performance SCSI-2 Controller, EISA Bus, 68020 Processor

Model PM2122/95 . . . . $ 620.00
High Performance SCSI-2 and Dual Floppy Controller, EISA Bus, 68020 Processor

Model PM2124/90 . . . . $ 495.00
PCI Bus SCSI-2 Fast, No Floppy Controller

ACCESORIES

Model SM4000/4 . . . . . $ 950.00
4MB ECC SIMM for Caching Module, Install up to 4

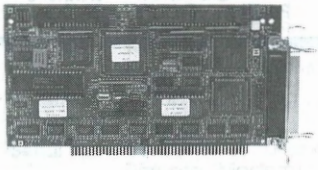
Model SM4000/16 . . . . . $3350.00
16MB ECC SIMM for Caching Module, Install up to 4

Model CM4000 . . . . . $ 555.00
Caching Memory Option Card, No Memory Installed Accepts Standard 36bit, 72pin SIMMs (PS/2 Style), Any Capacity 80nS or Faster, Low Profile, Single Sided. Also Accepts Proprietary ECC SIMMs Listed Below.

Model DM4000 . . . . . $ 555.00
RAID Module Option, Requires CM4000 with Minimum 1MB RAM (4MB RECOMMENDED as a Minimum)

Adaptec SCSI-2 Controllers

Model AHA-1542CP-KIT



FEATURES

- Full Kit Includes Software and Internal Drive Cable
- Industry Standard Command Set

ORDERING GUIDE

Model AHA2842VL-KIT . $ 319.00
VESA Bus SCSI-2

Model AHA-2742T-KIT . $ 479.00
EISA SCSI-2 Host Controller Kit, Includes EZ-SCSI Software

Model AHA-1542CP-KIT $ 339.00
Includes EZ-SCSI Software

Model AHA-2940-KIT . . $ 399.00
PCI Bus, SCSI-2 Fast Controller, Single ended

Model AHA-2940W-KIT $ 449.00
PCI Bus, SCSI-2 Fast/Wide, Single Ended

ACCESORIES

Model SYTOS+ . . . . . $ 125.00
Tape Backup Software

Model CORELSCSI . . . . $ 129.00
Corel SCSI Software Driver Set for Removable Media

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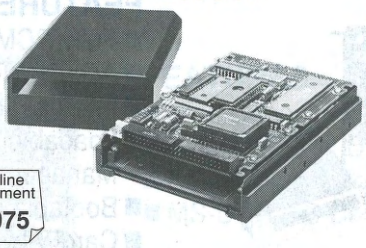
FAX

Solid State IDE Disk Drives

These drives offer non-volatile, solid state disk operation for AT and compatible systems. The drive interfaces from a standard IDE disk drive controller as found in most PC systems. The FLASH ROM operates in a FAT File emulation mode offering that capability to boot from the FLASH disk and to read and write files as you would with any IDE disk drive. This drive does not use the Microsoft Flash File System which requires bulk erase and bulk write operations. The units are in a rugged, metal housing that permits mounting into a standard 3.5", half-height disk drive bay.

Model IDE05SSI



Faxline Document #:1075

All drives are environmentally resistive

FEATURES

- Operation from Standard IDE or SCSI Disk Controller
- Bootable, FAT File Emulation, 512byte Sectors
- Operating System Independent
- Resists Environmental Hazards: Salt, Sand, Dust, Fungus

SPECIFICATIONS

Capacities 4.0MB, 10MB, 20MB, 40MB, and 80MB

Interface AT Compatible IDE Disk Drive Interface, Master Configuration Or SCSI-II 512byte Write/Erase Sectors

Access Time < 1.5ms (.7mS checkit 3.0)

Data Transfer Rate 3.75MB/Second Initial 650KB/Second Sustained Read 60KB/Second Sustained Write

Data Reliability Built-in ECC; less than 1 non-recoverable error in 10^{13} bytes read >200,000 Write Cycles per Bit

Operating Environment -20 to +70°C; 5 to 95%, RHNC; To 40,000 ft Altitude 50G, 11mS Shock Tolerance; 15G, 5 to 2000Hz Vibration Tolerance; Salt Atmosphere, Sand, Dust and Fungus Resistant

Storage Environment -10 to 70°C; 5 to 95% RHNC; To 50,000 ft Altitude; 100G, 11mS Shock Tolerance; 15G, 5 to 2000 Hz Vibration Tolerance; Salt Atmosphere, Sand, Dust and Fungus Resistant

DIMENSIONS (L x W x H)

IDE 5.75" x 4.0" x 1.0" (146 x 102 x 25mm)

SCSI 5.75" x 4" x 1.625" (146 x 102 x 41mm)

Connector 40pin IDE Connector - IDE 50pin High Density SCSI-II Connector - SCSI

Power Requirements +5VDC, ±5%

Standby/Read 0.5W IDE, 1.5W SCSI

Write/Erase 1.0W IDE, 3.0W SCSI

MTBF > 200,000 POH IDE; >100,000 POH SCSI

ORDERING GUIDE

IDE DRIVES

Model IDE04SSI . . . . . $ 1359.00
4MB FLASH ROM, IDE

Model IDE10SSI . . . . . $ 1999.00
10MB FLASH ROM, IDE

Model IDE20SSI . . . . . $ 2899.00
20MB FLASH ROM, IDE

Model IDE40SSI . . . . . $ 3899.00
40MB FLASH ROM, IDE

Model IDE80SSI . . . . . $ 5699.00
80MB FLASH ROM, IDE

Model IDE160SSI . . . . . $ 8559.00
160MB FLASH ROM, IDE. Is Configured as Master & Slave from Drivers

SCSI DRIVES

Model SCSI04SSI . . . . . $ 2109.00
4MB FLASH ROM, SCSI

Model SCSI10SSI . . . . . $ 2999.00
10MB FLASH ROM, SCSI

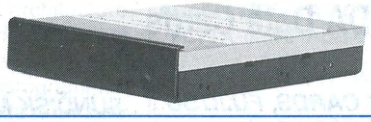
Model SCSI20SSI . . . . . $ 3559.00
20MB FLASH ROM, SCSI

Model SCSI40SSI . . . . . $ 4559.00
40MB FLASH ROM, SCSI

Model SCSI80SSI . . . . . $ 6429.00
80MB FLASH ROM, SCSI

Model SCSI160SSI . . . . . $ 9269.00
160MB FLASH ROM, SCSI

Model PCFIDE



FEATURES

- FLASH ROM IDE Bootable Disk Drive
- Operating System Independent
- >50,000 Write Cycles
- Standard 3.5" Drive Size
- 0 to 60°C Operation

SPECIFICATIONS

Capacities 5.0MB, 10MB, 20MB, 40MB, and 80MB

Interface AT Compatible IDE Disk Drive Interface, Master Configuration 512byte Write/Erase Sectors

Start Up Time Sleep to Read <20msec Sleep to Write <3ms

Data Transfer Rate Reading : 3.75MB/Sec Writing/Burst: 2.5MB/Sec Writing/Cont.: 50KB/Sec

MTBF >200,000 Hour

Data Reliability <1 Non-recoverable per 10^{13} Bits read

Endurance > 50,000 Write/EraseCycles per Bit

Power Requirements +5V ±5% Sleep: 3mA Read: 100mA Write: 200mA

Temperature 0 to 60°C Operating -20 to 85°C Storage

Humidity 8 to 95%, RHNC

Vibration 15Gs pk-pk

Shock 50Gs Operating 100Gs Non-Operating

Dimensions (L x W x H) 5.75" x 4" x 1" (146 x 102 x 254mm)

Weight 8 oz (1.1kg)

ORDERING GUIDE

Model PCFIDE05 . . . . . $ 689.00
5MB FLASH ROM, IDE, Non-Sealed

Model PCFIDE10 . . . . . $ 919.00
10MB FLASH ROM, IDE, Non-Sealed

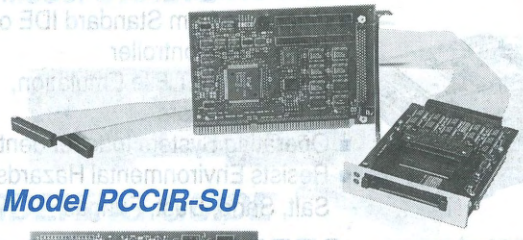
Model PCFIDE20 . . . . . $ 1369.00
20MB FLASH ROM, IDE, Non-Sealed

Model PCFIDE40 . . . . . $ 2289.00
40MB FLASH ROM, IDE, Non-Sealed

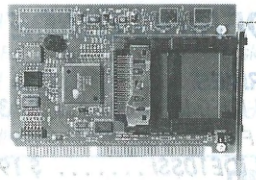
Model PCFIDE80 . . . . . $ 3429.00
80MB FLASH ROM, IDE, Non-Sealed

PCMCIA Card Adapter

Model PCCS2-I



Model PCCIR-SU



FEATURES

- Fully PCMCIA 2.1 and JEIDA 4.1 Compliant Drive
- Accepts Type I, Type II & Type III Cards
- Internal and External Access Models
- Loadable Drivers for Socket & Card Management Services
- Bootable and Non-bootable Models
- Card View GUI and Device Drivers for Windows 3.x
- Transfer Rates to 600KB/Sec

Made in USA

The PCCS2 PCMCIA card drives offer a choice of "embedded" application mounting or standard front panel access mounting for the PCMCIA card. The embedded unit, PCCIR-SU offers access to the card slot from the rear panel of the system chassis. The opening in the mounting bracket permits easy installation of either one Type III or up to two Type I and Type II cards.

The PCCS2-I and the PCCS2-IB offer the same features in a choice of booting or non-booting configurations. The card access is via a drive escutcheon that fits standard 3.5" drive mounting enclosures. As with the embedded model, 1 or 2 Type I or Type II cards, or a combination may be installed or a single Type III card may be installed.

Software support is provided for most available cards including loadable device drivers for Socket Services and Card Management Services, Microsoft Flash File System 2 Support, and device driver support for IDE/ATA PCMCIA hard drives. "CARDVIEW" is a GUI driver for use of the cards under Windows 3.xx which supports card presence and change detection.

SPECIFICATIONS

I/O Addresses	3E0-3E1H
Memory Addresses	D000-DFFFH, Normal Operation Bootable Option requires Selectable Memory Address - C8000-C9FFF, CA000-CBFFF, CC000-CDFFF, CE000-CFFFF, D0000-D1FFF, D8000-D9FFF, or DC000-DDFFF
Bus Speed	8.33Mhz Recommended Maximum
Memory Requirements	8KB (Typical - Can be 4KB through 64KB Depending on Card Type) Windows Opened for Cards in Upper Memory C8000 to EFFFH, Selectable in Configuration
Cards Supported	TYPE I, TYPE II and TYPE III SRAM and FLASH Memory, FAX, Modem, Network, IDE/ATA Drives, Other cards complying with PCMCIA 2.1
Operating Modes	Non-Booting, Booting with EEPROM Option
Transfer Rate	Up to 600KB/Second
Indicators	Card Activity LED
Software Utility Provided	Installation Software, Configuration Utility, Windows 3.XX Configuration Utility, Socket Services, Card Services

Model PCCS2-I . . . . . $ 269.00
PCMCIA Card Adapter, Internal, w/Floppy Drive Escutcheon, Non-Bootable

Model PCCS2-IB . . . . . $ 319.00
PCMCIA Card Adapter, Internal, w/Floppy Drive Escutcheon, Bootable Option

Model PCCIR-SU . . . . . $ 209.00
PCMCIA Card Adapter, Rear Panel Access for Cards

Model PCCIR-SUB . . . . . $ 249.00
PCMCIA Card Adapter, Rear Panel Access for Cards, Bootable

ORDERING GUIDE

PCMCIA/JEIDA Data Cards

FLASH MEMORY CARDS

Model FD01VC01 . . . . . $ 119.00
PCMCIA Type 1, 1MB, FFS

Model FD02VC01 . . . . . $ 179.00
PCMCIA Type 1, 2MB, FFS

Model FD04VC01 . . . . . $ 269.00
PCMCIA Type 1, 4MB, FFS

Model FD08VC01 . . . . . $ 449.00
PCMCIA Type 1, 8MB, FFS

Model FD10VC01 . . . . . $ 539.00
PCMCIA Type 1, 10MB, FFS

Model FD16VC01 . . . . . $ 819.00
PCMCIA Type 1, 16MB, FFS

Model FD20VC01 . . . . . $ 999.00
PCMCIA Type 1, 20MB, FFS

SRAM MEMORY CARDS, FUJITSU

Model MB98A90611-20 $ 69.00
PCMCIA SRAM, Type 1, 64KB

Model MB98A90711-20 $ 85.00
PCMCIA SRAM, Type 1, 128KB

Model MB98A90811-20 $ 115.00
PCMCIA SRAM, Type 1, 256KB

Model MB98A90931-20 $ 139.00
PCMCIA SRAM, Type 1, 512KB

Model MB98A91031-20 $ 239.00
PCMCIA SRAM, Type 1, 1MB

Model MB98A91131-20 $ 359.00
PCMCIA SRAM, Type 1, 2MB

SUNDISK MEMORY CARDS, SEAGATE

Model ST72P . . . . . $ 285.00
SUNDISK 2.5MB FLASH Card

Model ST75P . . . . . $ 405.00
SUNDISK 5MB FLASH Card

Model ST710P . . . . . $ 635.00
SUNDISK 10MB FLASH Card

Model ST720P . . . . . $ 1115.00
SUNDISK 20MB FLASH Card

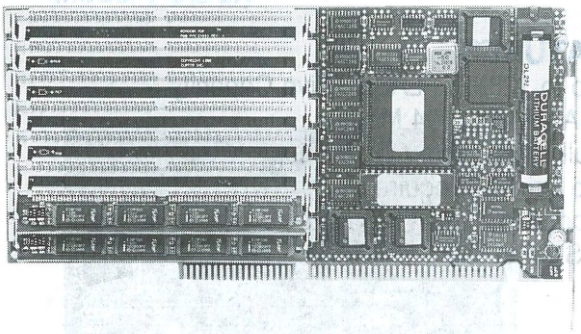
Model ST740P5 . . . . . $ 1695.00
SUNDISK 40MB FLASH Card

Due to fluctuating market prices, list prices on memory cards are subject to change without notice.

Easy To Order - Fast Shipment

FLASH/SRAM Disk Emulator

Model PCF1A-0MSR



FEATURES

- High Capacity up to 14MB
- Single or Dual Disk Modes
- Autobooting Operation
- MS-DOS 6.0 Compatible

Made in USA

The PCF1A can emulate a single high capacity data disk or both a single high capacity disk and a floppy diskette to provide autobooting from a diskette image, in addition to providing high capacity data storage. The PCF1A can use either SRAM or FLASH memory technology SIMMs. With FLASH memory SIMMs and the Microsoft Flash File System (FFS), the PCF1A operates as a WORM (Write Once Read Many times) FLASH disk emulator. With battery backed SRAM SIMMs and the SRAM loadable device driver, the PCF1A operates as a read/write SRAM disk emulator. SIMM modules provide up to 14MB of data storage by using up to 7 1MB or 7 2MB FLASH memory SIMMs or up to 7MB using 1MB SRAM SIMMs. A proprietary FLASH gate array and micro-controller core architecture provides high speed read, programming and FLASH erasure. Intelligent architecture allows command processing independent of computer system's CPU. The PCF1A boot SIMM can be erased and reprogrammed from an image file on a diskette to simplify the reprogramming operation.

SPECIFICATIONS

Memory Type	FLASH EPROM orBattery Backed SRAM or Combination
Memory Capacity	14MB FLASH 7MB SRAM
Operating Modes	Single Drive Dual Drive Flash "Floppy" Drive SRAM "Fixed Disk Drive" Autobooting Non-Booting (File Mode)
I/O Port Address-16Bytes	2B0, 2C0 (Autoboot Ports) 2D0, 2E0 (Non-Boot Ports)
BIOS ROM Addressing	CA00, CC00 (Auto-Boot Addresses) CE00, D000 (Non-Boot Addresses)

CONFIGURATION GUIDE

FLASH MEMORY ONLY

PCF1A-0MFE Add up to 7 1MB or 7 2MB FLASH SIMMs
First 1MB SIMM or first MB of First 2MB SIMM Becomes Boot "Floppy"

SRAM ONLY

PCF1A-0MSR Add up to 7 1MB SRAM SIMMs
In Autoboot HD Mode, Operates as a single "Hard Disk" in System
In Autoboot FD Mode, Operates as boot "floppy" on first SIMM. Remainder of SIMMs Supported with Virtual Disk Loadable Device Driver

FLASH/SRAM COMBINATION

PCF1A-0MFS First SIMM Can Be Boot "Floppy". Use 1MB SIMM, FLASH or SRAM, in First SIMM Socket. Add up to 6 Additional 1MB or 2MB FLASH SIMMs or 1MB SRAM SIMMs, Non-Mixed.

ORDERING GUIDE

Model PCF1A-0MFE $369.00
FLASH EPROM board with FFS
Model PCF1A-0MSR $369.00
Battery Backed SRAM board with Battery
Model PCF1A-0MFS $369.00
Combo board with Battery & FFS

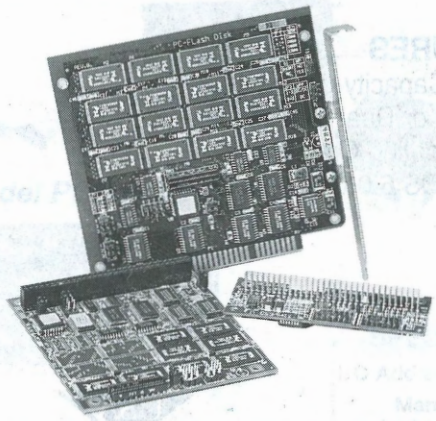
MEMORY SIMMS

Model PCF1-FE1 . . . . . $199.00
1MB FLASH EPROM SIMM
Model PCF1-FE2 . . . . . $249.00
2MB FLASH EPROM SIMM
Model PCF1-SR1 . . . . . $199.00
1MB SRAM SIMM

NOTE: FLASH EPROM market prices have been volatile in the recent past. Please call to verify pricing of FLASH SIMMs when placing your order.

PC FLASH Disk

Model PCFD Series



FEATURES

- Up to 128MB FLASH Drive Capacity
- ISA and PC/104 Models
- Full Read/Write Capabilities
- No Drivers Required
- Bootable Flash File System
- MS-DOS, DR-DOS and Windows Compatible

The FLASH DISK is a very easy to use, immediately available solid state "fixed disk drive". Ideal for harsh environment applications, the FLASH DISK can be quickly installed with any motherboard or passive backplane architecture system. There are no drivers required! The "disk" becomes immediately available as either drive D: if you already have a fixed disk, or drive C: if it is the only "fixed disk" in the system. It can work in conjunction with floppy disk drives. Up to four boards may be installed in a system providing up to 128MB of FLASH DISK drive. The on-board *True Flash File System* operates up to three times faster in write and ten times faster in read operations than FFS/2. The system algorithm automatically compensates for FLASH wear out over time minimizing the amount of space lost as the FLASH is written to.

The +5VDC operation reduces the power requirements in PC/104 systems - no 12VDC supplies are necessary. The ISA board utilizes the 12VDC available in most standard systems.

SPECIFICATIONS

MTBF	2,460,000 P.O.H. per Mil-Hdbk-217D
Power Requirements	+5VDC Only in PC/104 Models +5VDC and +12VDC in ISA Bus Model
Power Consumption (Typical)	Standby: 250mW Read: 270mW Write (1MB): 370mW Write (2MB): 490mW Write (≥4MB): 730mW

DIMENSIONS (H X L)

ISA Bus Version	4.2" x 4.9" (119.9 x 103.4mm)
PC/104 (LV)	3.6" x 1.2" (90.2 x 29.2mm)
PC/104 (HV)	3.6" x 3.8" (90.2 x 96.5mm)
Data Transfer Rates	Seek: <0.1mSec Read: 1.2MB/Sec Write 120KB/Sec Sustained Write250KB/Sec Peak
Write-Protect	On-board

MEMORY CAPACITY

ISA or PC/104 (HV)	1, 2, 4, 8, 16 or 32 MB
PC/104 (LV)	1, 2, 4 MB

Memory Type	Intel Flash Memory
Maximum Cycles	Read: Unlimited Write: 100,000 Min. per bit
Supported Operating Systems	MS-DOS or PC-DOS, V2.0 and later Windows 3.XX, DR-DOS, All Versions
BUS Interface	8 bit ISA
Memory Usage for FFS	<23KBytes

ENVIRONMENTAL

Operating Temperature	0 to 65°C
Relative Humidity	5 to 95% RHNC
Shock	>1000G, 1/2 sine, 10mS, 3 Axes
Vibration	10G, P-P, 5-2000Hz, 3 Axes
Altitude	50,000 Feet
Storage Temperature	-65 to +125°C
Storage Humidity	5 to 95% RHNC

ORDERING GUIDE

Model PCFD1V ..... $ 119.00
1MB FLASH Disk, ISA Bus Card

Model PCFD2V ..... $ 179.00
2MB FLASH Disk, ISA Bus Card

Model PCFD4V ..... $ 269.00
4MB FLASH Disk, ISA Bus Card

Model PCFD8V ..... $ 449.00
8MB FLASH Disk, ISA Bus Card

Model PCFD16V ..... $ 819.00
16MB FLASH Disk, ISA Bus Card

Model PCFD32V ..... $ 1599.00
32MB FLASH Disk, ISA Bus Card

Model TFD1HV ..... $ 119.00
1MB PC/104 FLASH Disk

Model TFD2HV ..... $ 179.00
2MB PC/104 FLASH Disk

Model TFD4HV ..... $ 269.00
4MB PC/104 FLASH Disk

Model TFD8HV ..... $ 449.00
8MB PC/104 FLASH Disk

Model TFD16HV ..... $ 819.00
16MB PC/104 FLASH Disk

Model TFD32HV ..... $ 1599.00
32MB PC/104 FLASH Disk

Model TFD1LV ..... $ 119.00
1MB PC/104 FLASH Disk

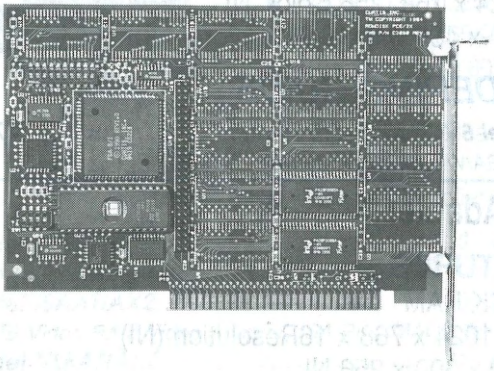
Model TFD2LV ..... $ 179.00
2MB PC/104 FLASH Disk

Model TFD4LV ..... $ 269.00
4MB PC/104 FLASH Disk

Order Now!

Solid State Disk Emulator

Model PCE/2X



FEATURES

- Solid State Disk Drive
- FLASH and SRAM Capabilities
- Up to 16MB FLASH + 2.0MB SRAM
- Operating to +70°C

Made in USA

The PCE/2X solid state disk emulator uses nonvolatile FLASH and SRAM memory devices. The ISA bus interface provides compatibility with XT through Pentium AT class machines. The lack of rotating media devices permits systems to be used in hostile environments where normal disk drives would be rendered useless. The access time for FLASH and SRAM devices are also significantly faster than standard rotating magnetic media.

The PCE/2X permits the use of FLASH or FLASH and SRAM combination for maximum flexibility. For applications not requiring continuous writing and erasing of data files, FLASH memory provides an efficient nonvolatile storage media. For applications with frequent to continuous data storage write/erase requirements, the SRAM daughter board may be added for up to 2.0MB of battery backed non-volatility with fast write/read times. The daughter board functions as a second, independent disk drive on the FLASH board.

SPECIFICATIONS

ROM Address	C8000-CDFFF, D0000-D5FFF
I/O Address	2B0-2BF
Disk Emulation	Hard or Floppy (to 4.0MB)
Write Protection	Switch Enabled
FLASH Cycles	100,000 Write Minimum per bit Unlimited Read
FLASH Transfer Rate	80KB/S Write 750KB/S Read
FLASH Latency	0.2mS
SRAM Transfer Rate	2MB/S Read/Write
SRAM Latency	0.1mS

Power Required

	Read	Write	Idle
+5VDC	85mA	125mA	55mA
+12VDC	N/A	30mA	N/A

Operating Temperature	0 to +70°C
Storage Temperature	-20 to +85°C
Humidity	5 to 95%, RHNC
Dimensions (L x H)	6.5" x 4.2" (165.1 x 106.7mm)

ORDERING GUIDE

Model PCE/2X-1M . . . . . $ 169.00
1MB FLASH Disk Emulator

Model PCE/2X-2M . . . . . $ 229.00
2MB FLASH Disk Emulator

Model PCE/2X-4M . . . . . $ 319.00
4MB FLASH Disk Emulator

Model PCE/2X-8M . . . . . $ 499.00
8MB FLASH Disk Emulator

Model PCE/2X-12M . . . . . $ 679.00
12MB FLASH Disk Emulator

Model PCE/2X-16M . . . . . $ 869.00
16MB FLASH Disk Emulator

Model PCE2-SRDB-180 . . . $ 129.00
180K SRAM Daughter Board Disk Emulator

Model PCE2-SRDB-360 . . . $ 149.00
360K SRAM Daughter Board Disk Emulator

Model PCE2-SRDB-720 . . . $ 209.00
720K SRAM Daughter Board Disk Emulator

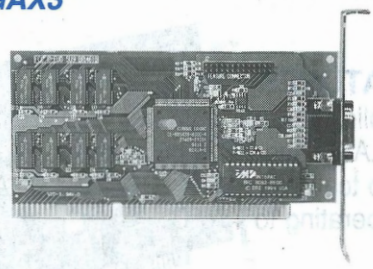
Model PCE2-SRDB-1.2 . . . . $ 269.00
1.44M SRAM Daughter Board Disk Emulator

Model PCE2-SRDB-2.0 . . . . $ 359.00
2.0M SRAM Daughter Board Disk Emulator

Video Cards

True Color Accelerator

Model SVGAX3



FEATURES

- GUI Accelerator and SVGA Adapter
- Speeds Up Windows Applications
- 1280 x 1024, 16 Color
- 1024 x 768, 256 Color, NI
- 640 x 480 with 16.7M Colors

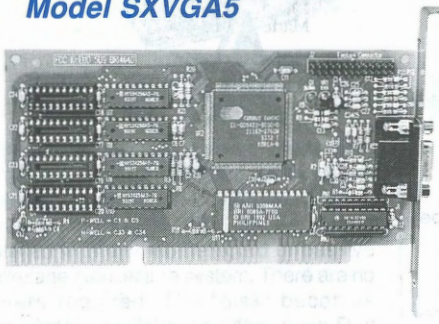
ORDERING GUIDE

Model SVGAX3 ..... ***$ 179.00***

SVGA/Windows Accelerator, 1M VRAM

Super Graphics Adapter

Model SXVGA5



Made in USA

FEATURES

- 512K RAM
- To 1024 x 768 x 16Resolution (NI)
- 800 x 600 x 256 NI
- 640 x 480 x 256 NI
- 72Hz Maximum Refresh Rate
- VESA Feature Connector

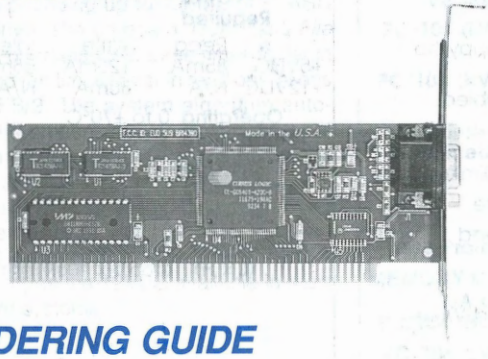
ORDERING GUIDE

Model SXVGA5 ..... ***$ 99.00***

512K RAM, DOS/Windows Drivers

SVGA Graphics Adapter

Model VGA-BASIC2



FEATURES

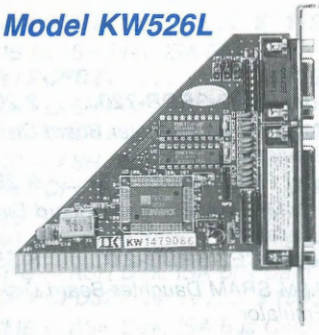
- 100% Register-Level Compatibility
- 800 x 600 VGA Resolution in 16 Colors
- 132-Column Text Display
- 70Hz Refresh
- Supports Analog, Multiple Frequency 15-pin Monitors
- 16/8-Bit Auto-Select Feature
- IBM AT, 80286, 80386, IBM Models 25/30 Compatible
- Includes 256K Video RAM

ORDERING GUIDE

Model VGA-BASIC2 ..... ***$ 69.00***

Monochrome TTL Video Adapter

Model KW526L



FEATURES

- TTL Video Display Output
- 40 x 25 or 80 x 25 Text, To 720 x 348 Graphics
- Supports MDA and HGC Graphics Standards
- Centronics Parallel Port

ORDERING GUIDE

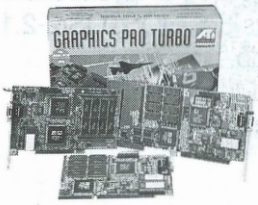
Model KW526L ..... ***$ 29.00***

Mono TTL Display Adapter with Parallel port

Video Cards
Accelerators, and Flat Panel Controllers

High Performance Video Accelerator

Model ISAATIAX2



Faxline Document #:1099

FEATURES
- ISA, VESA & PCI Models
- 2MB Video RAM
- 1280 x 1024 NI, 256 Color
- 1024 x 768 NI, 65K Color
- 640 x 480, 800 x 600 NI, 16.7M Color
- VESA Feature Header Connector
- Mach 64 Controller

Model PCIATIAX2 ..... **$ 459.00**
2MB Video RAM Adapter, PCI Bus, MACH 64

Model ISAATIAX2 ..... **$ 459.00**
2MB Video RAM Video Adapter, ISA Bus, MACH 64

Model VLBATIAX2 ..... **$ 459.00**
2MB Video RAM Video Adapter, VESA Local Bus, MACH 64

Number Nine PCI SVGA

Model NB9FX1330/IP

Faxline Document #:1322

FEATURES
- DRAM or VRAM Models
- 2MB or 4MB VRAM
- 1MB or 2MB DRAM
- 640 X 480 Through 1024 X 768NI
- VESA Feature Connector
- 64-bit Graphics Engine
- Energy Star Features

Model NB9FX13301P ..... **$ 199.00**
SVGA, 1MB DRAM, S3 Trio64, PCI Bus

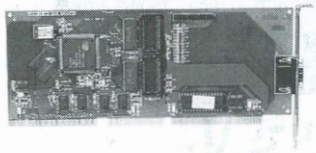
Model NB9FX13302P ..... **$ 259.00**
SVGA, 2MB DRAM, S3 Trio64, PCI Bus

Model NB9FX27712P ..... **$ 399.00**
SVGA, 2MB VRAM, S3 Vision 968, PCI Bus

Model NB9FX27714P ..... **$ 599.00**
SVGA, 4MB VRAM, S3 Vision 968, PCI Bus

VESA SVGA Video

Model VGAXL1



FEATURES
- VL Bus SVGA
- To: 1280 x 1024 x 16 (I), 1024 x 768 x 32K, 800 x 600 x 64K, 640 x 480 x 16.7M
- 1MB or 2MB RAM
- VESA Feature Connector

Model VGAXL1 ..... **$ 149.00**
SVGA VESA Bus Video Adapter, Driver Disk, 1MB RAM

Model VGAXL2 ..... **$ 239.00**
SVGA VESA Bus Video Adapter, Driver Disk, 2MB RAM

Diamond Stealth Viper Pro PCI SVGA

Model PCIVIPERPRO

FEATURES
- 2MB or 4MB
- Supports PCI Bridge Chip Backplanes
- 1600 x 1200 NI
- 64K with 2MB, True Color with 4MB

NEW!

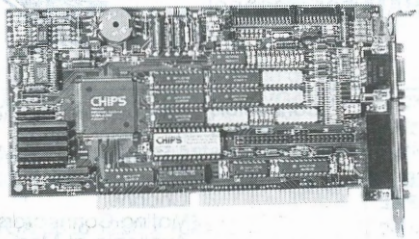
Faxline Document #:1303

Model PCIVIPERPRO/2 ..... **$ 549.00**
2 MB

Model PCIVIPERPRO/4 ..... **$ 749.00**
4 MB

Flat Panel Controller

Model FME25



Made in USA

FEATURES
- Simultaneous CRT & Panel Display (Except Dual Scan Panels)
- To 1024 x 768 x 16 or 640 x 480 x 256 CRT Output
- Up to 64 Gray Shades on Monochrome LCD, EL or Plasma Panels
- Up to 185,000 Colors on TFT Color Panels
- Up to 226,000 Colors on STN Color Panels

(Specify Panel Model When Ordering)

Model FMC30-(Panel #) $ 389.00
Controller for Monochrome LCD Panels

Model FSC30-(Panel #) $ 389.00
Controller for STN Single or Dual Scan LCD Panels

Model FME25-(Panel #) $ 389.00
Controller for Monochrome EL Panels

Model FMP25-(Panel #) $ 389.00
Controller for Monochrome Plasma Panels

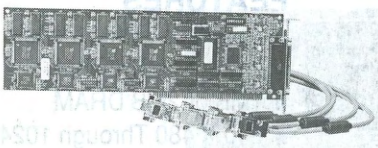
Model FHTC30-(Panel #) $ 389.00
Controller for Hitachi TFT Color LCD Panels

Model FTC25-(Panel #) $ 389.00
Controller for Sharp, NEC & Toshiba TFT Color Panels

EXPRESS SOURCE-BOOK FAXLINE
FAX
1-800-677-7329
Receive a detailed FAX within Minutes!

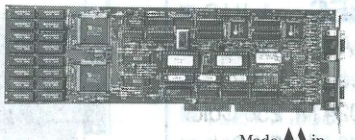
Multi-Port SVGA Accelerators

Model MVP-4X



Faxline Document #:1101

Model MVP-2X



Made in USA

FEATURES

- 2 or 4 Port SVGA Controllers
- Windows 3.x, DOS, OS/2-2.1 Compatible
- "Virtual Monitor" to 2048 x 1536 pel

The MVP-2X and MVP-4X are multi - port SVGA video adapter cards, offering two or four port accelerated video outputs for multimedia presentations, training sessions, large "virtual monitor" displays, dual monitor applications, etc. The "virtual monitor" can be a 2 x 2 cube of monitors, all being driven from one PC with an MVP-4X accelerator installed. Up to 4 MVP-4X adapters may be installed in a system, or 8 MVP-2X, creating a possible 4 x 4 Virtual monitor display. Customer programming in DOS can display the same or different information on all attached monitors. A typical Windows' display may be opened up across all four monitors or shrunk to fit one of the four monitors. Four applications may be opened, each one with a full monitor presentation. The mouse or pointing device tracks automatically across all four displays. The MVP-2X permits the same applications to run on a two display setup. Drivers are included for Windows 3.X and DOS. OS/2-2.1 drivers are available on request.

SPECIFICATIONS

Video Controller	Tseng Labs ET4000/W32I
Resolutions	320 x 200 x 16.7M 640 x 480 x 16.7M 800 x 600 x 65K 1024 x 768 x 256 1280 x 1024 x 16 (I) (DOS Only)
Vertical Refresh	70Hz @ 320 x 200 60-72Hz @ 540 x 480, 800 x 600 60-70Hz @ 1024 x 768 88Hz @ 1280 x 1024
Memory	1MB per Channel
Winmarks	13M per Channel Simultaneous or Better

CONNECTORS

MVP-2X	Dual DB15S Connectors on Rear Panel Standard VGA Analog Monitor Interface
MVP-4X	Single Connector on Rear Panel with Cable to Four DB15S Connectors Standard VGA Analog Monitor Interface

ORDERING GUIDE

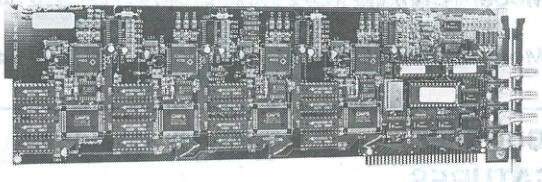
Model MVP-2X . . . . . $ 1099.00

Two Channel Board, Driver Diskette for Windows 3.X/DOS, Windows NT 3.5

Model MVP-4X . . . . . $ 1999.00

Four Channel Board, Driver Diskette for Windows 3.X/DOS, Windows NT 3.5

Model MVPNTSC4A



Faxline Document #:1170

FEATURES

- 4 Port VGA to NTSC/PAL
- Up to 4 Boardsper System
- VESA Feature Connector per Channel
- Cirrus Logic Accelerators
- 1MB DRAM per Channel

Made in USA

The Model MVPNTSC4A permits the simultaneous display of accelerated SVGA displays on standard TV monitors OR the presentation of different displays on up to four monitors. The use of coaxial cabling permits the use of NTSC or PAL monitors up to 150ft from the PC without special boosters.

SPECIFICATIONS

Channels	4 Channels per Board To 4 boards per system

OUTPUT RESOLUTION SUPPORTED

Resolution	Colors	VESA	NTSC	PAL
320 x 200	16.7M	Y	Y	Y
640 x 480	16.7M	Y	Y	Y
800 x 600	65k	Y	N	Y
1024 x 768	256	Y	N	N

Memory	1MB DRAM per Channel
DAC	Cirrus Logic
Connectors	VESA Feature
Connectors (cont.)	VESA Feature Connector per Channel 'F' Connector, Screw Type Co-axial, per Channel (Mating Connectors Available at Most Retail Video Outlets)
Software	Loadable Device Driver Support for DOS only, User programming required
MTBF	>100,000 P.O.H.

ORDERING GUIDE

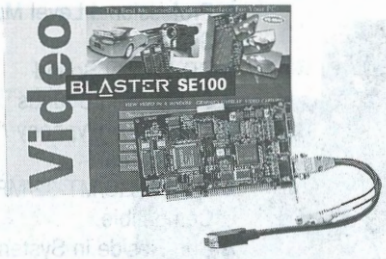
Model MVPNTSC4A . . . $ 1799.00

4 Channel, NTSC/PAL, SVGA Accelerator, Driver Disk

Multimedia Video Card
VGA to NTSC

Creative Labs Video Blaster SE100

Model CL206042



NEW!

FEATURES

- Software Selectable Video Source from 2 Composite or 1 S-Video Input
- Supports NTSC, NTSC-M, PAL, PAL-B, PAL-G
- Overlay Live Video on VGA in Resizable Windows
- Capture High Quality Single Frames
- Supports BMP, TIFF, GIF, MMP, PCX, TGA, or JPEG

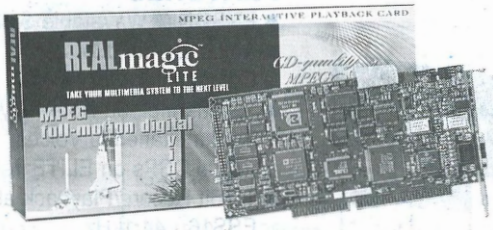
The Video Blaster SE100 is designed to support up to 800 x 600 256 color SVGA standard which incorporates a feature connector. The Video Blaster SE100 has no 16MB PAM limitation. It allows both memory and I/O mapping. The board also provides TWAIN driver support.

ORDERING GUIDE

Model CL206042 . . . . . $ 329.00
Card, manuals, software, cables

Multimedia MPEG Video Card

Model REALMAGIC/LITE



NEW!

FEATURES

- Full Frame, Full-Motion Video @ 30 fps
- CD-Quality MPEG Audio
- Supports 1024 x 768 VGA or SVGA with Standard Feature Connector
- Includes Software and Cables

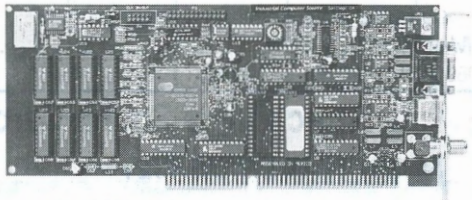
ORDERING GUIDE

Model REALMAGIC/LITE. . . . . $ 349.00
Card, manuals, software, cables

Ergonomic VGA and NTSC Display Accelerator

Model CHANNEL1

Faxline Document #:1023



FEATURES

- VGA or NTSC Output Selectable
- S-Video Output
- VGA Resolutions Up to 1280 x 1024
- 1MB DRAM for True Color Output
- Line Averaging Program for Flicker-Free Video
- Multiple Board Operation per CPU

Introducing the CHANNEL1, a high quality, affordable solution for displaying VGA on a television set or any VGA monitor. The CHANNEL1 has powerful standard features designed to maximize productivity such as:

- SVGA up to 1280 x 1024
- NTSC output to 640 x 480
- S-Video output
- Feature connector
- Zero-wait state and hardware cursor
- True color output for photographic quality image display

The CHANNEL1 is FCC class B certified, backed by a two-year warranty, and over 11 years of design experience.

CHANNEL1 is the ideal solution for developers of PC-based graphical presentations. Features include accelerated performance under Windows along with the ability to record graphics onto video tape.

CHANNEL1 utilizes a high-performance Cirrus Logic accelerator chip to produce crisp, VGA compatible output. Resolutions from 320 x 200 with 16.7 million on-screen colors, up to 1280 x 1024 with 16 color video suitable for display on a television or recording on videotape.

For VGA to NTSC conversions, the CHANNEL1 is the product of choice. The CHANNEL1 supports a variety of applications which include: Point of sale, financial services, interactive entertainment, traffic control and transportation, traffic control and transportation, training simulations, educational multimedia, and process control/factory automation.

ORDERING GUIDE

Model CHANNEL1 . . . . . $ 399.00
VGA to NTSC, manual, drivers

Sound Cards
Highest Quality Audio For Any Application!

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

Sound BLASTER AWE32

Model CL202760

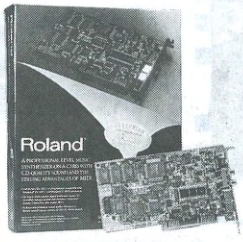
Faxline Document #:1132

FEATURES
- 16- and 8-bit Selectable Stereo Sampling and Playback
- Sample and Playback Rates from 5kHz to 44.1kHz
- Real-time Hardware Compression and Decompression
- Pro Audio Sounds from E-mu Systems
- 16 Channel, 32-note Polyphony
- Supports General MIDI, Sound Canvas, and MT-32 Sound Sets

Model CL202760 ..... ***$ 375.00***
Board, manuals, software, cables, microphone

Roland GS Sound Card

Model SCC-1B



NEW!

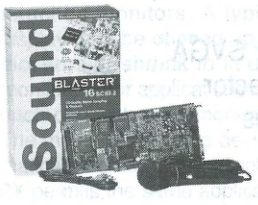
Faxline Document #:1307

FEATURES
- Professional Level Music Synthesizer
- CD-Quality Sound
- 317 Built-In Sounds
- 24 Voice Polyphony / 16 Part Multitimbral
- Roland GS/MT-32/MPU-401 Compatible
- Can Reside in System w/ Another Sound Card
- MIDI Adapter Cable Included

Model SCC-1B ..... ***$ 399.00***
Sound Card, manuals, software, cables

Sound BLASTER 16 SCSI-2

Model CL112102



Faxline Document #:1021

FEATURES
- True 16-Bit CD-Quality Stereo Sound
- Selectable Sampling Rates From 5kHz to 44.1kHz
- 16-Bit Audio Compression/ Decompression Ratio of 16:4
- Enhanced FM Synthesis Using OPL3 Chip
- Improved Stereo Digital Mixer
- Supports any SCSI-2 Device That Does Not Need Boot ROM
- Microphone Included

Model CL112102 ..... ***$ 309.00***
Board, manuals, software, cable, microphone
Model CL112095 ..... ***$ 265.00***
Same as above, without ASP

ENSONIQ SOUNDSCAPE Cards

Model ESS16-ELITE

NEW!

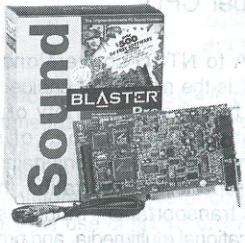
Faxline Document #:1309

FEATURES
- ENSONIQ Wavetable Synthesis
- AdLib & SoundBlaster Compatible
- 16 Channel, 32 Note Polyphony, 32 Simultaneous Voices (Dual DSPs on ELITE version)
- 16-Bit Record/Playback at up to: ESS16 - 44.1kHz ESS16-ELITE - 48kHz
- 16-Bit A/D D/A CODEC, Full 16-Bit Synthesizer DAC

Model ESS16 ..... ***$ 199.00***
Card, manuals, software
Model ESS16-ELITE ..... ***$ 285.00***
Card, manuals, software

Sound BLASTER Pro

Model CL112056



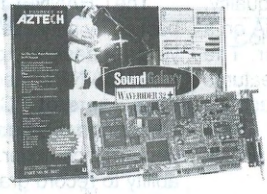
Faxline Document #:1022

FEATURES
- Digitized Stereo or Mono Record/Playback
- Enhanced OPL3 Stereo FM Synthesizer
- Mixing of all Audio Sources: Mic, PC Speaker, Stereo FM, Stereo Digitized Voice, Stero Line-in, & CD Audio
- CD-ROM Interface

Model CL112056 ..... ***$ 99.00***
Board, manuals, cable, software

Aztech Labs Sound Card

Model WAVERIDER32+



NEW!

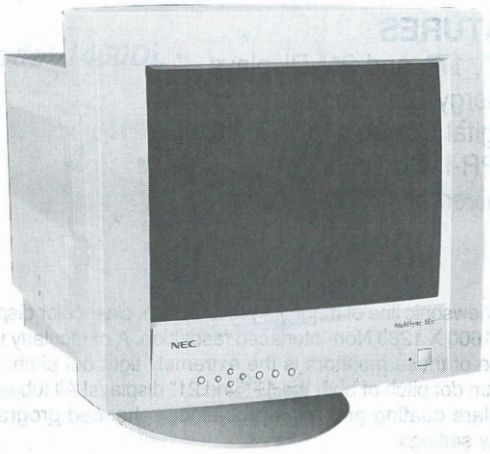
Faxline Document #:1308

FEATURES
- Built-In Wavetable Synthesis
- 48kHz Sampling Rate
- 16-Bit CD Quality Sound
- AdLib & SoundBlaster Compatible
- Supports Roland MPU-401, MT-32 & General MIDI
- Microphone & Headphones Included

Model WAVERIDER32+ ..... ***$ 175.00***
Card, Software, manual, microphone, headphones

One Stop Shopping

NEC Color Monitors



FEATURES

- 14" Through 21" Monitors
- XV, XE, and XP Series Available
- 100-120VAC, 50/60Hz
- Energy Management Features
- MPR II Emission Guidelines Compliant

Nationally known for their brilliant displays and crisp colors, the NEC monitors are available in three sizes and in three series. The XV series is the newest series, the XE series offers slightly higher performance and the XP series is their "professional" series.

All NEC monitors are subject to allocation and deliveries may not meet quoted times.

SPECIFICATIONS

Model	Diagonal	Dot Pitch	Band Width	Max. NI Res.	Dim. W x H x D (mm)	Power	Horiz. (KHz)	Vert. (Hz)
NECXV14	14"/13.0V	.28mm	75MHz	1024 x 768	14.2" x 14.3" x 15.7" (360.7 x 363.2 x 398.8)	1.7A	30-57	50-100
NECXV15	15"/13.8V	.28mm	85MHz	1280 x 1024	14.6" x 15.3" x 16.3" (370.8 x 388.6 x 414)	1.8A	31-65	55-100
NECXV17	17"/15.6V	.28mm	85MHz	1280 x 1024	16.4" x 17.1" x 19.3" (416.6 x 434.3 x 490.2)	2.0A	31-65	55-100
NECXE15	15"/13.8V	.28mm	85MHz	1280 x 1024	14.6" x 15.5" x 16.1" (370.8 x 393.7 x 408.9)	1.8A	31-65	55-120
NECXE17	17"/15.6V	.28mm	85MHz	1280 x 1024	16.4" x 17.1" x 19.3" (416.6 x 434.6 x 490.2)	1.9A	31-65	55-120
NECXE21	21"/19.8V	.28mm	85MHz	1280 x 1024	20.2" x 20.4" x 22.5" (513.1 x 518.2 x 571.5)	1.9A	31-65	55-120
NECXP15	15"/13.8V	.28mm	85MHz	1280 x 1024	14.6" x 15.5" x 16.1" (370.8 x 393.7 x 408.9)	1.8A	31-65	55-160
NECXP17	17"/15.6V	.28mm	140MHz	1280 x 1024	16.4" x 17" x 19.3" (416.6 x 431.8 x 490.2)	2.4A	31-82	55-160
NECXP21	21"/19.8V	.28mm	190MHz	1600 x 1200	20.2" x 20.8" x 22.5" (513.1 x 528.3 x 571.5)	3.3A	31-89	55-160

ORDERING GUIDE

Model NECXV14 . . . . . $ 385.00
14"D, Color SVGA Monitor

Model NECXV15 . . . . . $ 535.00
15"D, Color SVGA Monitor

Model NECXV17 . . . . . $ 929.00
17"D Color SVGA Monitor

Model NECXE15 . . . . . $ 699.00
15"D. Color SVGA Monitor

Model NECXE17 . . . . . $ 1225.00
17"D Color SVGA Monitor

Model NECXE21 . . . . . $ 2439.00
21"D Color SVGA Monitor

Model NECXP15 . . . . . $ 799.00
15"D Color SVGA Monitor

Model NECXP17 . . . . . $ 1619.00
17"D Color SVGA Monitor

Model NECXP21 . . . . . $ Call
21"D Color SVGA Monitor

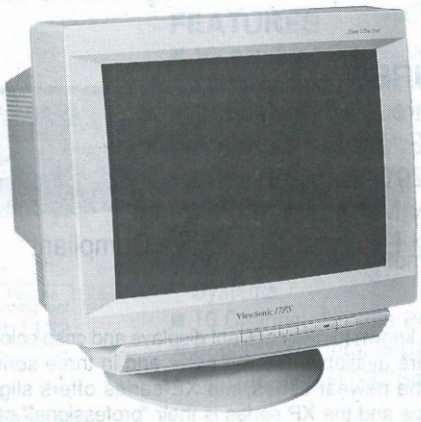
Model MSXLENS15 . . . . $ 89.00
Slide On Anti Glare Screen for 15" Monitors

Model MSXLENS17 . . . . $ 109.00
Slide On Anti Glare Screen for 17" Monitors

Model MSXLENS21 . . . . $ 159.00
Slide On Anti Glare Screen for 21" Monitors

Viewsonic Color Monitors
& Video Standards Table

Model V17PS



NEW!

FEATURES

- 15", 17", and 21" Displays
- Energy Star Compliant
- Digital Controls
- MPR-II Compliant
- Universal 120-240 Power

The Viewsonic line of monitors provide crisp, clear color displays with up to 1600 X 1280 Non-interlaced resolution. A particularly important feature of these monitors is the extremely tight dot pitch. Note the 0.25mm dot pitch of both the 17" and 21" displays! All tubes have an anti-glare coating and microprocessor enhanced programmable display settings.

SPECIFICATIONS

Model	Diagonal	Dot Pitch	Bandwidth	Max. NI Res.	Dim. W x H x D (mm)	Power	Horiz. (KHz)	Vert. (Hz)
V15GS	15"/13.7V	.27mm	86MHz	1280 x 1024 65Hz	14.7" x 15.1" x 16" (374 x 383 x 407mm)	90-264VAC	30-69	50-160
V17PS	17"/16V	.25mm	86MHz	1600 x 1280 60Hz	17.2" x 16.5" x 17.2" (438 x 418 x 438mm)	90-264VAC	30-82	50-160
V21PS	21"/19.8V	.25mm	135MHz	1600 x 1280 60Hz	19.9" x 18.8" x 20" (505 x 478 x 510mm)	90-264VAC	30-82	50-160

ORDERING GUIDE

***Model V15GS** . . . . . $ 539.00*
15" Monitor with Pedestal Base

***Model V17PS** . . . . . $ 1189.00*
17" Monitor with Pedestal Base

***Model V21PS** . . . . . $ 2299.00*
21" Monitor with Pedestal Base

Tech. Tip: Video Standards

	Resolution	Typical Horizontal Scan (KHz)	Vertical Scan (Hz)	Vertical Signals	Video Connector
MDA	80 x 25	18.4	50	2TTL	9-pin
CGA	320 x 200	15.7	60	4TTL	9-pin
EGA	640 x 350	18.4	50	2TTL	9-pin
		15.7	60	4TTL	9-pin
		21.9	60	6TTL	9-pin
MCGA	320 x 200	31.5	70	3 Analog	15-pin
		31.5	60	3 Analog	15-pin
VGA	640 x 480	31.5	70	3 Analog	15-pin
		31.5	60	3 Analog	15-pin
SVGA	800 x 600	35.2	56	3 Analog	15-pin
(VESA)		37.9	60	3 Analog	15-pin
XVGA	1024 x 768I	35.5	60	3 Analog	15-pin
(8514A)	1024 x 768NI	49-62	60	3 Analog	15-pin

I = Interlaced NI = Non-Interlaced

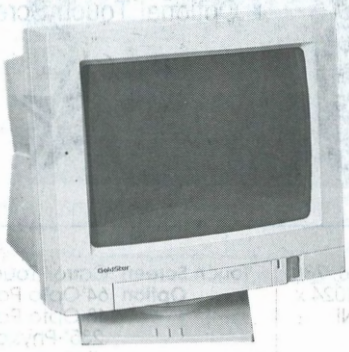
Free Technical Support

Mitsubishi, Goldstar & Amdek
Monitors

Rack Mount Adapters for Monitors, see page 82

Goldstar 14" VGA & Non-Glare VGA Color Monitor

Model 1460DL



DIMENSIONS

(W x H x D)	14.0" x 15.0" x 12.4" (356 x 381 x 316mm)
(W x H x D) with T/S Base	14.0 x 15.0 x 14.4" (356 x 381 x 366mm)
Weight	24.7lbs (11.2 kg)

COMMON FEATURES

- 9.4" H x 7.1" V (239 x 180mm) Display Area
- 31.5 to 35.5kHz Horizontal, Auto
- 56 to 87Hz Vertical, Auto
- 640 x 350 to 800 x 600 NI (1024 x 768 I) Resolution
- 100-240VAC, 50/60Hz, 1.0A
- Energy Star

(1455DL)

- 14", 90° Deflection, 0.39mm Dot Pitch Polished Glass

(1460DL)

- 14", 90° Deflection, 0.28mm Dot Pitch, Non-Glare

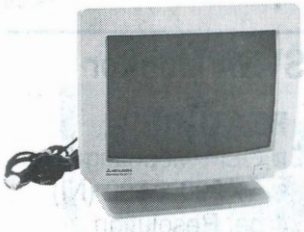
ORDERING GUIDE

Model 1460DL ..... ***$ 395.00***
14" Non-Glare VGA Color Monitor (Touch Screen Bezel Available)

Model 1455DL ..... ***$ 335.00***
14" VGA Monitor

SVGA 14" Color Monitor

Model SD4561CA



FEATURES

- 14"/13"V SVGA .28mm Dot
- 75MHz Bandwidth
- Digital Controls
- Energy Star Compliant
- MPR-II Compliant

Faxline Document #:1183

NEW!

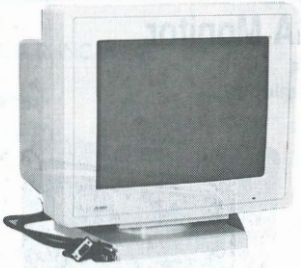
The Diamond Pro 14 Plus is a high resolution 14" color monitor that blends Mitsubishi's proven spherical CRT design with ease-of-use and performance features to provide an outstanding display for general business and industrial applications. The Diamond Pro 14 Plus includes a microprocessor-based 31.5 to 62kHz auto-scan range and meets MPR-II emission and EPA Energy Star power management standards.

ORDERING GUIDE

Model SD4561CA ***$569.00***
Monitor, manual, Attached VGA Cable, Pedestal

Amdek VGA Monochrome Monitors

Model AM/432NW



FEATURES

- 14"/13V Monochrome CRT
- 640 x 480 Resolution
- .28mm Dot Pitch, Paper White Phosphor
- 50 to 70Hz Vertical, Auto
- 31.5kHz Horizontal, Auto
- 25Mhz Maximum Bandwidth
- Non-Glare, Etched Glass Screen
- 120VAC, 60Hz Power Required

DIMENSIONS

(W x H x D)	13.97" x 14.2" x 12.45" (355 x 360 x 315mm)

ORDERING GUIDE

Model AM/432NW ..... ***$ 199.00***
Paper White Monochrome Monitor

Industrial Monitors
20" Diagonal Rack Mount & 14" and 9" OEM Monitors

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

These units are built around an SVGA monitor capable of 1280 x 1024 resolution with 0.31mm dot pitch. The dot clock offers up to 75Mhz bandwidth with vertical refresh rates up to 70Hz and full VESA compliance.

The 9020-R is available with an optional Carroll Touch Infra Red Touch Screen which comes with DOS and Windows 3.X driver software. The resolution of the touch screen feature is 0.235" horizontal and vertical. The interface to the touch screen is provided via an RS232C controller mounted in the 9020-R(IR) chassis.

Model 9020-R

FEATURES
- 20"/17.7"V Diagonal Monitor
- Rack or Panel Mount
- Optional Touch Screen

Made in USA

SPECIFICATIONS

Display Size	20"D/17.7"V
Mask Pitch	0.31mm
Screen	P22, Non-Glare, Dark Body
Display Area (H xV)	14.2" x 10.6" (360mm x 270mm)
Bandwidth	75Mhz
Horizontal Scan Rate	31.47kHz, 35.53kHz, 37.88kHz, 48.36kHz, 56.48kHz
Vertical Scan Rate	44Hz, 60Hz, 70Hz
Resolution	656 x 362, 656 x 496, 738 x 414, 800 x 600, 1024 x 768, 1280 x 1024 NI

OPERATING ENVIRONMENT

Temperature	5 to 35°C
Humidity	10 to 95% RHNC
Altitude	To 10,000ft
Dimensions 9020-R(IR) (W x H xD)	19" x 17.46" x 16.6" (Behind Panel) (482.6 x 443.5 x 421.6) 2.28" (57.9mm) Protrusion From Panel
Weight	-R: 73lbs (160kg) -RIR: 75lbs (165kg)
Touch Screen Option	Carroll Touch IR 64 Opto Pairs, X Axis 48 Opto Pairs, Y Axis .235" Physical Resolution 25-50 Scans/Second Windows (Mouse) Drivers Included
Agency Approvals	Meets FCC Class A Requirements UL Recognition Pending
Power Requirement	120VAC/60Hz 220VAC/50Hz Selectable 130W(Max)

Model 9020-R $2949.00
Rack Mounted Monitor

Model 9020-RIR. $4249.00
Rack Mounted Monitor with Touch Screen and RS232C Controller Installed

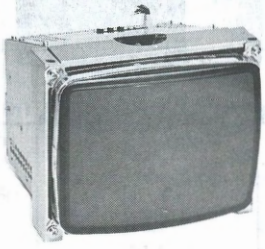
ACCESSORIES

Model 7500-RMK . . . . . $ 75.00
Chassis Slide Rails for Equipment Racks, 24-30" Depth

Model 7500-RMK18 . . . $ 75.00
Chassis Slide Rails for Equipment Racks, 18-24" Depth

OEM 14" VGA Monitor

Model 4-510017-0



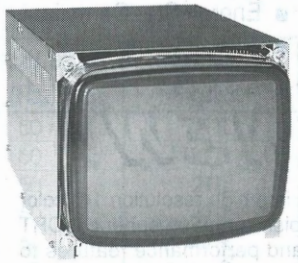
FEATURES
- 14"/13V SVGA Monitor
- 800 x 600, N.I., Max. Res
- .31mm Dot Pitch
- 15kHz to 37kHz Auto Horizontal Scan
- 45Hz to 80Hz Vert. Scan
- Cable with DB9 to DB15 Adapter
- 3 BNC for RGB, 1 BNC for H-Sync, 1 BNC for V-Sync
- 120/220 VAC Switch Selectable

DIMENSIONS (H X W X D)
10.9" x 13.4" x 15.0"
(276.9 x 340.3 x 381mm)

Model 4-510017-0 . . . . . $ 1500.00
Monitor, manual, DB9 to DB15 adapter

OEM 9" Color SVGA Monitor

Model OEM9-VGA3



FEATURES
- OEM Mounting Cage
- To 800 x 600 (NI) pel Resolution
- Display Controls Harness
- Non-Glare Screen
- 120/220, 50/60Hz Power, 60W
- Made in the USA!

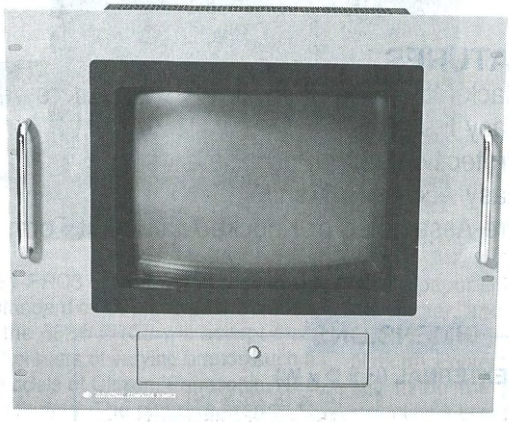
Faxline Document #:1182

Model OEM9-VGA3 . . . . . $ 1395.00
Monitor, Controls Harness, Power Cord

Model 50039-01 . . . . . $ 25.00
Cable, 36", DB-9P to DB-15P

Service - Support - Reliability

Model 9014A-R



FEATURES

- 14" Diagonal Monitor
- SVGA Resolution
- Rack or Panel Mount
- Optional Touch Screen
- Energy Star Compliant

Made in USA

These units are built around an SVGA monitor capable of 1024 x 768 resolution with 0.28mm dot pitch. The 45Mhz bandwidth offers vertical refresh rates up to 87Hz and full VESA compliance. The monitor features are the same for both rack mount and panel mount models. The panel mount model offers NEMA4 compliance in addition to the other features.

Both models are available with an optional Carroll Touch Infrared Touch Screen which comes with DOS and Windows 3.x driver software. The resolution of the touch screen feature is ¼" horizontal and vertical. The interface to the touch screen is provided via an RS232C controller.

Model 9014A-P

SPECIFICATIONS

Display Size	14"D/13"V
Deflection	90°
Mask Pitch	0.28mm
Screen	Non-Glare, Dark Body
Display Area	9.4" H x 7.1" V (238.8 x 180.3mm)
Bandwidth	45MHz
Horizontal Scan Rate	31.5KHz, 35.2KHz, 35.5KHz
Vertical Scan Rate	56Hz, 60Hz, 70Hz, 87Hz
Resolution	640 x 350, 640 x 480, 720 x 400, 800 x 600, 1024 x 768(I)

OPERATING ENVIRONMENT

Temperature	0 to 40°C
Relative Humidity	10 to 95% RHNC
Altitude	To 10,000ft

DIMENSIONS (W x H x D)

9014A-R(IR)	19" x 15.72" x 15.54" (482.6 x 399.3 x 394.7mm) Weight: 45lbs (20.45kg)
9014A-P(IR)	16.75" x 16.75" x 15.54" (425.4 x 425.4 x 394.7mm) Weight: 45lbs (20.45kg)

Construction	12 Gauge Steel Front Panel, Painted - Cardinal Paint, #8103-44705, Gray, Medium Texture, Water Based 18 Gauge Steel Chassis, Gold Zinc Plate Finish
Touch Screen Option	Carroll Touch IR 40 Opto Pairs, X Axis 30 Opto Pairs, Y Axis ¼" Physical Resolution 25-50 Scans/Second Windows (Mouse) Drivers Included
Agency Approvals	Meets FCC Class A Requirements UL Recognition Pending
Power Requirement	120/220VAC Selectable 50/60Hz, 1.0A < 70 Watts Energy Star Compliant Power Saver Mode < 15 Watts When "Blank" Screen Saver Detected

ORDERING GUIDE

Model 9014A-R . . . . . $ 1195.00
Rack Mounted Monitor

Model 9014A-R(IR) . . . . $ 1895.00
Rack Mounted Monitor with Touch Screen and Serial Controller Included

Model 9014A-P . . . . . $ 1595.00
Panel Mounted, NEMA4 Monitor

Model 9014A-PIR . . . . . $ 2295.00
Panel Mounted Monitor with Touch Screen and Serial Controller Included

ACCESSORIES

Model 7500-RMK . . . . . $ 75.00
Chassis Slide Rails for Equipment Racks 24-30" Depth

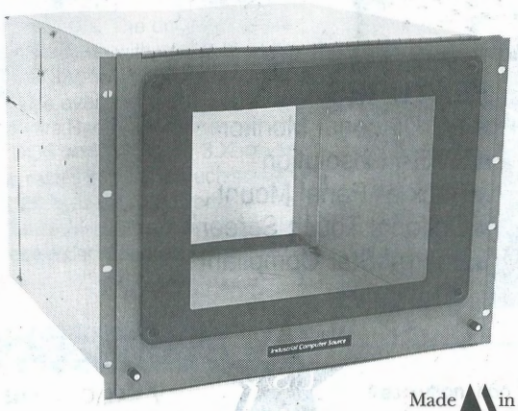
Model 7500-RMK18 . . . $ 75.00
Chassis Slide Rails for Equipment Racks 18-24" Depth

Model 8200TSC-3CBL . . $ 39.00
Cable for Serial Controller to PC, 3', F/F, DB-9

Rack Mount Monitor Kits

Rack Mount Monitor Kits for Monitors up to 14"

Model 6531-UM



Made in USA

FEATURES

- Rack Mount for Most 12" to 17" Monitors
- Easy Installation
- Protective Lexan Face Plate
- Easy Access to Monitor
- Pre-Assembled or Knocked Down Kit Form

DIMENSIONS

EXTERNAL (H x D x W)
14" x 18.75" x 19"
(356 x 476 x 483mm)

INTERNAL (H x D x W)
13.75" x 17.75" x 16.75"
(349 x 451 x 426mm)

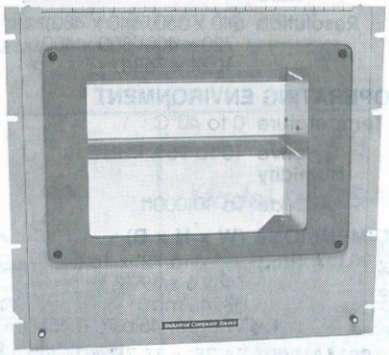
ORDERING GUIDE

Model 6531-UM ..... ***$ 329.00***
Assembled Rack Mount Kit

Model 6531-UMK ..... ***$ 259.00***
Unassembled Rack Mount Kit

Rack Mount Monitor Kits for Monitors up to 15" & 17"

Model 6531-UMM



Faxline Document #:1193

The Model 6531-UMM(K) will rack mount monitors with pedestal bases and up to 15" Diagonal tubes such as the NEC FG and XE Series. The monitor is left on its pedestal and is strapped down to the base of the 6531-UMM(K). The monitor is held against the front panel viewing window with adjustable restraining brackets.

FOR MONITORS UP TO 17"
The Model 6531-ULM(K) is the same as above but can accommodate up to 17" Diagonal tube monitors such as the NEC XE and XP Series.

DIMENSIONS

EXTERNAL (H x D x W)
6531-UMM(K) 17.5" x 19.2" x 19"
(445 x 488 x 483mm)
6531-ULM(K) 19.2" x 22.1" x 19"
(488 x 561 x 483mm)

INTERNAL (H x D x W)
6531-UMM(K) 16.5" x 18.2" x 16.7"
(419 x 462 x 424mm)
6531-ULM(K) 18.7" x 21" x 16.7"
(475 x 533 x 424mm)

ORDERING GUIDE

Model 6531-UMM ..... ***$ 379.00***
Universal monitor mount, monitors up to 15"

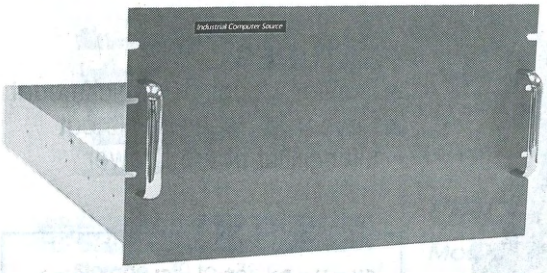
Model 6531-UMMK .... ***$ 299.00***
Kit form, monitors up to 15"

Model 6531-ULM ..... ***$ 399.00***
Universal monitor mount, monitors up to 17"

Model 6531-ULMK .... ***$ 319.00***
Kit form, monitors up to 17"

6531-PRC3 Printer Drawer

Model 6531-PRC3



FEATURES

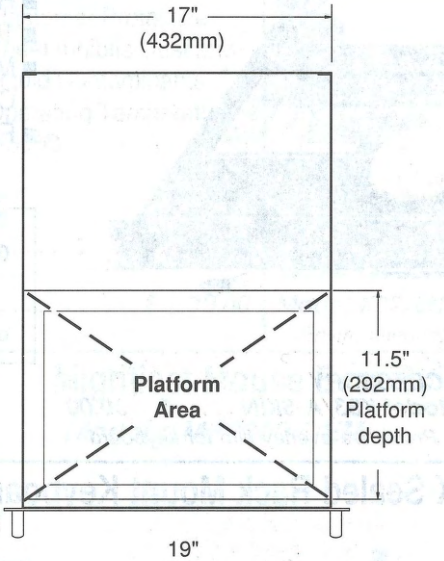
- Universal Printer Drawer
- Optional Slides
- Will Accept Many Standard Printers
- Paper Storage in Drawer
- In General, Will Fit Printers up to 17" (432mm) W by 14" (356mm) D by 6" (152mm) H

The 6531-PRC3 offers ease of rack mounting for standard office printers. The platform area of the 6531-PRC3 will accept many standard printers of varying brands such as certain models of Citizen, Panasonic, NEC, HP and Okidata. The platform area is 17" (432mm) wide by 11.5" (292mm) deep and is set back from the front panel 0.5". There is a 3" paper storage area provided below the printer, and a paper take up area for fanfold paper provided behind the printer platform. Printers of larger depth dimensions will fit on the platform as long as the mounting feet of the printer fit within the area described. Because of varying printer designs, the paper roller knob may have to be removed and stored in the drawer when the drawer is in the normal operating position.

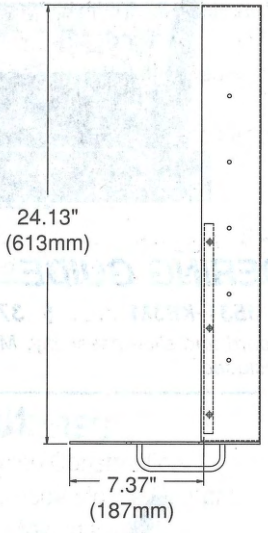
The printer is held in position by the use of the included industrial strength "hook and loop" fastener material. Optional accessories include chassis drawer slides, and a printer cable with a right angle connector.

DIMENSIONAL OUTLINES

Top View

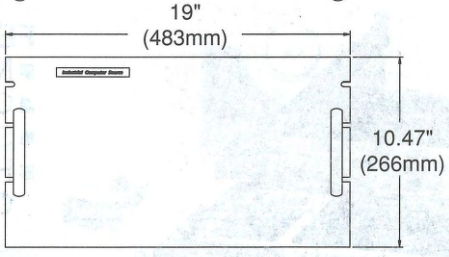


Side View



NOTE: Drawings not to scale

Front View



ORDERING GUIDE

Model 6531-PRC3 . . . . . $ 225.00
Printer drawer assembly

ACCESSORIES

Model 7500-RMK . . . . . $ 75.00
Chassis slides for 24 to 30" depth cabinets

Model CABLE-PAR90 . . $ 19.00
Printer cable, 90° connector

SMALL FOOTPRINT 9-PIN PRINTERS

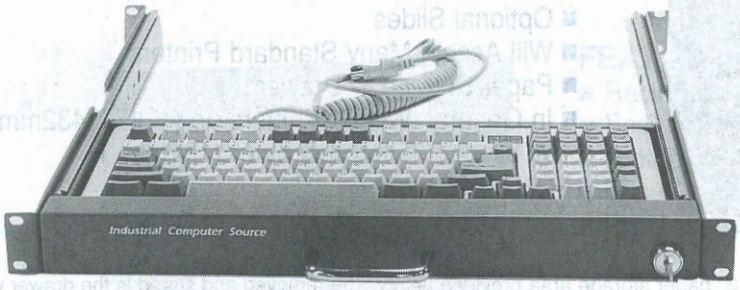
Model NX-1001 . . . . . $ 229.00

Model NX1040R . . . . . $ 269.00
Color printer

Model OKIML184T . . . . . $ 359.00

Industrial Keyboards
Rack Mount, NEMA4X & Rugged

Model 6531-KB3



FEATURES
- Drawer Mount, 19" Rackmount
- Keyboard Useable Without Lifting Out of the Drawer

DIMENSIONS

(W x H x D) 19" x 1. 75" x 17" (min.) (48.26 x 4.45 x 43.18mm)
19" x 1. 75" x 29.9" (max.) (48.26 x 4.45 x 75.95mm)

ORDERING GUIDE

Model 6531-KB3 . . . . . $ 325.00
Keyboard and slide assembly

ACCESSORY
Model KB3/A-SKIN . . . . $ 30.00
Protective overlay film for keyboard

Model 6531-KB3M

FEATURES
- Rack Mount 1.75" High
- 101-Key AT Keyboard
- Mouse Pad & Storage Compartment
- Fits 22" to 30" Deep Cabinets

DIMENSIONS

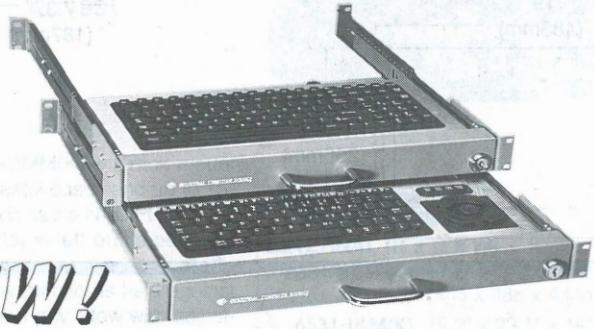
(W x H x D) 19" x 1. 75" x 17" (min.) (48.26 x 4.45 x 43.18mm)
19" x 1. 75" x 29.9" (max.) (48.26 x 4.45 x 75.95mm)

ORDERING GUIDE

Model 6531-KB3M . . . . $ 375.00
Keyboard and slide assembly, Mouse not included

ACCESSORY
Model KB3/A-SKIN . . . . $ 30.00
Protective overlay film for keyboard

NEMA4X Sealed Rack Mount Keyboards



NEW!

FEATURES
- NEMA4X (IP65) Sealed
- Chemical Resistive Keypad
- Standard AT Compatible
- Hulapoint Pointing Device Option

Made in USA

DIMENSIONS

(W x H x D) 19" x 1. 75" x 17" (min.) (48.26 x 4.45 x 43.18mm)
19" x 1. 75" x 29.9" (max.) (48.26 x 4.45 x 75.95mm)

ORDERING GUIDE

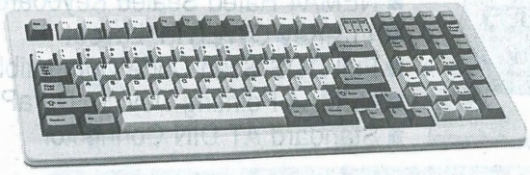
Model 6531-KB5 . . . . . $ 795.00
Rack Mounted Keyboard
Model 6531-KB5H . . . . . $ 1145.00
Rack Mounted Keyboard with Hulapoint, Driver Disks

Easy To Order - Fast Shipment

Keyboards & Industrial Mouse

Small Footprint Keyboard

Model KB3/A



FEATURES
- Voltage Supply: +5V/DC, 5%, Max. 300mA
- IBM PC/XT/AT Compatible
- Small Footprint 101-Key

SPECIFICATIONS

Storage Temperature	-40 to +70°C
Operating Temperature	0 to 50°C
Dimensions (W x H xD)	15.9" x 1.4" x 7.1" (405.8 x 35.6 x 180.3mm)

ORDERING GUIDE

Model KB3/A . . . . . $ 99.00
Small footprint 101-key keyboard

ACCESSORY

Model KB3/A-SKIN . . . . $ 30.00
Protective overlay film for keyboard

Model EPC-KBC . . . . . $ 5.00
Adapts AT keyboard to PS/2 connector (Usable with most AT keyboards)

Model KB2

FEATURES
- Rated at 50 Million Cycles
- Elastomer Protective Sheet Inhibits Dust and Liquid Contaminants
- Operating Temperature 0-50°C

ORDERING GUIDE

Model KB2 . . . . . $ 69.00
101-key keyboard

Model KB2-SKIN . . . . . $ 30.00
Protective overlay film for keyboard

Model KB2/ENV

FEATURES
- IBM Enhanced, PC and PC-AT Plug Compatible Electrical Interface
- Environmentally Protected Switch Contacts and Electronics
- Chemically Resistant Hard-Coated Polycarbonate Graphics Layer

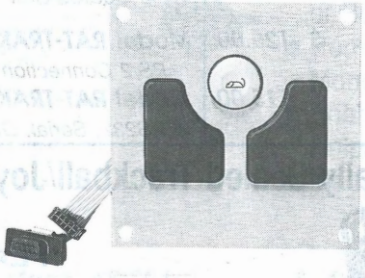
ORDERING GUIDE

Model KB2/ENV . . . . . $ 269.00
Environmentally Protected Keyboard

Mightiest Mouse Ever Built!

Model SMP2000

Model SMP2000/OEM



FEATURES
- Sealed Construction
- Microsoft Mouse Compatible
- No Moving Parts
- Cursor Control, Speed & Direction With One Button

The SMP2000/OEM is built for OEM applications and includes one cable. The SMP2000 has an attached serial cable and includes a serial to PS/2 adapter.

DIMENSIONS

SMP2000	5.0" x 4.25" x 1.0" (127 x 108 x 25mm)
SMP2000/OEM	4.5" x 4.5" x .75" (114 x 114 x 19mm)

Faxline Document #:1069

ORDERING GUIDE

Model SMP2000 . . . . . $ 279.00
Mouse Unit, Cable, Adapter, Manual; , DOS, Windows 3.x Driver Disk

Model SMP2000/OEM . $ 239.00
Mouse Unit, IDC-10 to DB-9S Cable (23");

ACCESSORY

Model VP720 . . . . . $ 15.00
Cable for OEM, 6', IDC Header to DB9-F

Model VP730 . . . . . $ 10.00
Cable, Serial to PS/2 Adapter, 6'

Industrial Keyboard & Pointing Device

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

Model KB5DP/NEMA

Faxline Document #:1087

FEATURES

- NEMA4 Rated Sealed Keyboard
- 113-Key QWERTY Layout
- Full DOS Scan Code Compatible
- NEMA4 Pointing Device, DuraPoint
- Standard AT DIN Connector

DIMENSIONS

Bench Top (W x D x H) 16.25" x 9.275" x 1.5" (413 x 236 x 38 mm) with Removable Rubber Feet

ORDERING GUIDE

Model KB5DP/NEMA ..... ***$ 895.00***
NEMA4 Sealed Keyboard, pointing device

Model KB5/NEMA

Faxline Document #:1087

FEATURES

- NEMA 4 Rated Sealed Keyboard
- 113-Key QWERTY Layout
- Fully DOS Scan Code Compatible
- Full Travel Keys
- Standard AT DIN Connector

DIMENSIONS

Bench Top (W x D x H) 16.25" x 7.8."x 1.5" (413 x 200 x 38mm) with Removable Rubber Feet

Panel Mount - Cut Out 16.4" x 7.9" (416.6 x 200.7mm)

Bezel 17.7" x 9.2" (450 x 233mm)

ORDERING GUIDE

Model KB5/NEMA ..... ***$ 495.00***
NEMA Sealed Keyboard, Bench Top Model
Model KB5/NEMAPM ..... ***$ 495.00***
NEMA Sealed Keyboard, Panel Mount Model

Microsoft® Mice

Model MSSERMOUSE/E

ORDERING GUIDE

Model MSBUSMOUSE/E ..... ***$ 125.00***
Bus Mouse
Model MSSERMOUSE/E ..... ***$ 115.00***
Serial, PS/2 Mouse (Illustrated)

Model RAT-TRAK™

FEATURES

- User Definable Keys
- Instant Speed Control
- Precision Stainless Steel Bearings
- 2" Phenolic Ball
- Hardened Stainless Steel Shafts
- Ergonomic Design
- Sealed Ball

Model RAT-TRAK/PS2 ..... ***$ 295.00***
PS/2 Connection
Model RAT-TRAK ..... ***$ 295.00***
RS232, Serial, DB-9 connector

Industrially Sealed Trackball/Joystick

Model HULAPOINT

NEW!

Faxline Document #:1304

FEATURES

- Serial & PS/2 Mouse Compatible
- NEMA-4X Enclosure
- 4.5" x 4.5" x 1"
- Microsoft & Logitech Compatible

This industrially sealed trackball/joystick pointing device provides Windows & DOS mouse driver compatibility in a factory user proof design.

ORDERING GUIDE

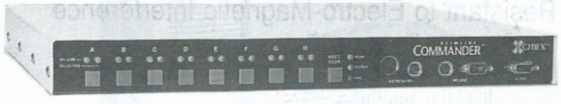
Model HULAPOINT ..... ***$ 249.00***
Pointing Device, PS/2 Adapter Cable, 6 ft. Signal Cord to DB-9S Connector

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

Multiple Station Control Station Doubler

Control Multiple PCs from One Station

Model PSRF-8



Faxline Document #:1319

NEW!

FEATURES

- Single Box Controls up to 8 PCs
- With Expansion Boxes, Control up to 96 PCs from One Station
- Designed for 19-Inch Rack Applications
- Supports Both PS/2 and Serial Mouse
- Dual Station Control Option Available
- Broadcast Commands to all Computers Simultaneously

ORDERING GUIDE

Model PSRF-2 . . . . . $ 775.00
2-port model, manual

Model PSRF-4 . . . . . $ 975.00
4-port model, manual

Model PSRF-6 . . . . . $ 1175.00
6-port model, manual

Model PSRF-8 . . . . . $ 1375.00
8-port model, manual

CABLE ASSEMBLIES

Model CVR-8 . . . . . $ 65.00
Cable, 8' VGA, 5-pin keyboard

Model CMR-8 . . . . . $ 75.00
Cable, 8' VGA, 5-pin keyboard, serial mouse

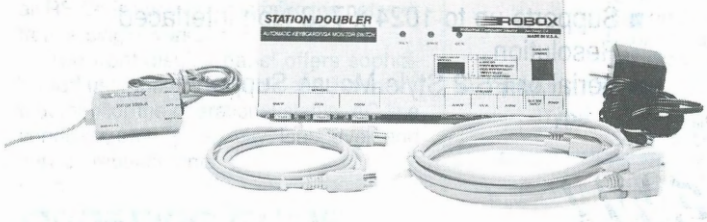
Model CVS-x . . . . . $ CALL
Extension cable for computer. Enter 25, 50, 100, 150 for x.

Model CVD-x . . . . . $ CALL
Extension cable for computer w/ keyboard & monitor, Enter 25, 50, 100, 150 for x.

Station Doubler

Model AS-304

Faxline Document #:1320



FEATURES

- Allows Second Keyboard and Monitor Alternative Access to one PC
- Access to Either Station can be Locked Out with the Privacy Switch
- No Damage to Equipment From Manual Switching at the PC
- Activate User's Screen Visibly Only, or Both Screens Visible for PC Monitoring
- Remote Access up to 500 Feet Away for Monochrome/CGA/EGA/VGA/SVGA
- Share Costly Workstations and Software – Helps Recession Budgets
- Many Standard Cable Lengths Available

ORDERING GUIDE

Model AS-301 . . . . . $ 340.00
Monochrome/EGA Transmitter, Local Cables, 120VAC Power Pack, Privacy Switch, To 50' Max Extension

Model AS-301/2 . . . . . $ 360.00
Same as above, 220VAC Power Pack

Model AS-302 . . . . . $ 125.00
Receiver for AS-301, Extends Length to 500' Max, 120VAC Power Pack

Model AS-302/2 . . . . . $ 145.00
Same as above, 220VAC Power Pack

Model AS-304 . . . . . $ 495.00
VGA Transmitter, Local Cables,120VAC Power Pack, Privacy Switch,To 250' Max Extension

Model AS-304/2 . . . . . $ 535.00
Same as above, 220VAC Power Pack

Model RS1505 . . . . . $ 150.00
RS232 Splitter Switch for Serial Mouse Extension to 50', 120VAC Power Pack Cables Not Included

Model RS1505/2 . . . . . $ 175.00
Same as above, 220VAC Power Pack

Model RA-311 . . . . . $ 125.00
Keyboard extender for AS-304 (requires HC1019TCx series cable)

Model RA-311/2 . . . . . $ 160.00
Same as above, 220VAC Power Pack

Keyboard/Mouse/Monitor Extenders

Keyboard/Monitor Extenders

Model EXV

FEATURES

- Self Powered
- No Extra Connectors Required
- Easy to Install
- Resistant to Electro-Magnetic Interference

Extend the distance between keyboard/ monitor and system unit up to 150 feet (45.72meters)!

The Extender is a rugged device which requires no external power. It is easy to install and use. At the system unit end there is a connector for the monitor and a connector for the keyboard. These connectors are exactly like the connectors on your monitor and keyboard. On the remote end there is a socket for your keyboard and a socket for your monitor. Connecting the two ends is a single, economical, small diameter (.375" or 9.5 mm) cable. Installation is simple since all connectors are keyed and of unique size and shape. Just plug in the connectors.

ORDERING GUIDE

EXTENDER 1 (CGA & EGA COLOR)

Model EXC . . . . . $ 175.00
Sender, Receiver, TTL

EXTENDER 2 (VGA COLOR - 640 X 480)

Model EXV . . . . . $ 185.00
Sender, Receiver, VGA

Model KBY . . . . . $ 15.00
Local keyboard "y" connector

CABLES (For both EXC and EXV)

Model CM-25 . . . . . $ 45.00
25ft. (7.62m)

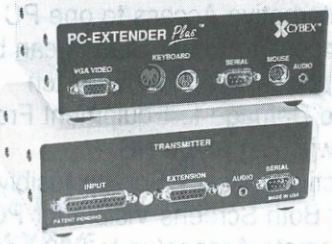
Model CM-50 . . . . . $ 65.00
50ft. (15.24m)

Model CM-100 . . . . . $ 100.00
100ft. (30.48m)

Model CM-150 . . . . . $ 150.00
150ft. (45.72m)

Keyboard/Mouse/Monitor Extenders

Model PEUE Series



FEATURES

- Supports PC, XT, AT, PS/2 and Compatibles
- Compatible with Monochrome & VGA/SVGA/XGA Monitors
- Supports up to 1024 x 768 Non-interlaced Resolution
- Serial or PS/2 Style Mouse Support

Working in a harsh or overcrowded environment could be harmful to your delicate system unit. This risk can be eliminated with the Model PEUE-0. This unit allows extending your keyboard, monitor and mouse up to 250 feet away from your system. The Model PEUE-0 helps you maintain system security, as well. Place your system unit, software and sensitive data in a secure area to minimize tampering and damage, and still provide access to those who need it.

The Model PEUE-0 consists of a transmitter at the system unit and a receiver at your remote workstation, linked by an extender cable. The input cable, which connects the transmitter to your system unit, is eight feet long. A 9VAC transformer is included to power the receiver. No expensive networks or special software is required, and installation takes just a few minutes.

NEW!

ORDERING GUIDE

Model PEUE-0 . . . . . $ 395.00
Sender, receiver, universal

Model PCUE-0 . . . . . $ 495.00
Provides for local monitor/keyboard/ mouse as well as remote

CABLES

Model CMB-25 . . . . . $ 45.00
25ft. (7.62m.)

Model CMB-50 . . . . . $ 65.00
50ft. (15.24m.)

Model CMB-100 . . . . . $ 100.00
100ft. (30.48m.)

Model CMB-150 . . . . . $ 150.00
150ft. (45.72m.)

Model CMB-250 . . . . . $ 250.00
250ft. (76.2m.)

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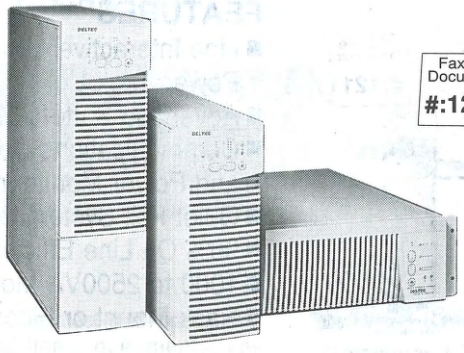
FAX
1-800-677-7329
Receive a detailed FAX within Minutes!



Faxline Document #:1210

FEATURES

- Advanced Battery Management
- Dual Conversion On-Line Technology
- Static Bypass Switch Standard
- Power Isolation
- Remote Emergency Power Off
- UPS Code II Compliant

The PowerWorks RS series Uninterruptible Power System is designed for mid-sized computer networks and other sensitive electronic equipment. The RS series provides quality power protection in a range from 2.1 to 6KVA and in stand alone as well as rack mounted configurations. Using Dual Conversion On-line Technology, this system is a true on-line UPS that delivers excellent voltage regulation, a bidirectional filter and extremely low input current distortion. Further, the RS Series assures quiet operation along with powerful performance.

The low profile cabinet has the smallest footprint available anywhere in its power range. This feature-rich UPS comes standard with Advanced Battery Management that increases battery life and speeds up the charge time. The RS Series comes standard with a communication interface consisting of an RS-232 port and a 6 foot cable that can be connected to a host computer to monitor the entire system operation. The LanSafe Software package even allows the testing of all RS Series power systems in the network from a single workstation.

The front display panel offers sophisticated user-friendly controls and indicators that monitor the operational status, AC line condition, battery capacity, load level, and service requirements.

SPECIFICATIONS

ELECTRICAL INPUT

Power Ratings 2.1, 3.1, 5.0 and 6.0KVA

Voltage 120VAC Nominal for 2.1/3.1KVA; 120/208 or 120/240VAC Nominal for 3.1/5.0/6.0KVA; -27% to +22%, Auto-configurable

Frequency 50/60Hz, 13Hz, Auto-Sensing

Power Factor 0.99 Active Correction

ELECTRICAL OUTPUT

Voltage 120VA Nominal for 2.1/3.1KA 120/208 and 120/240VAC Nominal for 3.1/5.0/6.0KVA

Regulation 12%

Efficiency >94% @ Typical Full Load

Overload Rating 300% of Full Load for 10 Cycles
150% of Full Load for 30 Seconds
125% of Full Load for 20 Minutes

INTERNAL BATTERY

Type Valve Regulated, Sealed, Lead Acid

Backup Time 10-15 Minutes @ Full Load (Standard Internal Battery Pack)

Recharge Time <3 Hours to 90% Capacity
8-24 Hours to 100% Capacity

PHYSICAL

Operating Temperature 0 to 40° C (Recommended 25° C Operation for Maximum Battery Life)

Operating Humidity 0 to 95% RHNC

Operating Altitude To 10,000ft (3000m)

Audio Noise <49dB @ 45% Load @ 25° C @ 1 meter

DIMENSIONS (W X H X D)

Tower Cabinets 6.8 x 16 x 23" (17.2 x 40.6 x 58.4mm)

Rack Cabinets 17.5 x 6.8 x 23" (44.5 x 17.2 x 58.4mm)

Weight Dependent on Internal Battery Configuration (KVA/Backup Time Ratings)

ORDERING GUIDE

STANDALONE MODELS

Model RST21NET $2650.00
2.1KVA, 120/120VAC In/Out, 125lbs

Model RST31NET $3020.00
3.1KVA, 120/120VAC In/Out, 135lbs

RACK MOUNT MODELS

Rack Mount Chassis Include Rack Mounting Ears — Cabinet/Rack Mounting Hardware, i.e. Angle Brackets, Are User Provided.

Model RSR21NET $2850.00
2.1KVA, 120/120VAC In/Out, 135lbs

Model RSR31NET $3230.00
3.1KVA, 120/120VAC In/Out, 140lbs

FACTORY INSTALLED OPTIONS

Model RS30PZ . . . . . $ 350.00
Mechanical Bypass Switch

Model RSSB . . . . . $ 150.00
Start without AC on Battery

Additional Models Available!

ADDITIONAL BATTERY UNITS

Up to Three Battery Units May be Added to Chassis in Daisy Chain to Increase Battery Backup Time.

Model RS3RP2T . . . . . $ 995.00
Additional Battery Unit for Standalone Chassis

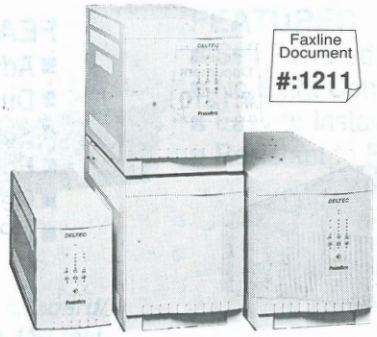
Model RS3RP2R . . . . . $ 995.00
Additional Battery Unit for Rack Mount Chassis

Deltec
Line Interactive UPS

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

The PowerRite Pro UPS is compact quiet and easy to install and operate. Advanced Battery Management (ABM) prolongs battery life and speeds recharge time to give you maximum reliability. ABM also gives you up to 60 days warning prior to the end of useful battery life!

The PowerRite Pro UPS includes an RS-232 port which allows the unit to report its operational status to a host computer. The PowerRite Pro is also fully compatible with FailSafe and LanSafe UPS monitoring software packages.



Faxline Document #:1211

FEATURES

- Line Interactive Power Back Up
- Advanced Battery Management
- Communications Capabilities and Power Monitoring
- Quiet Full System Back Up
- 96% On Line Efficiency
- 1000 to 2500VA Models
- Rack Mount or Floor Mount

SPECIFICATIONS

ELECTRICAL INPUT

Voltage User Selectable On-Line Voltage Range

Power Levels 1000 to 2500VA (2200VA Stand Alone)

On-line Efficiency 96%

On-line Regulation -10%, +6%

Battery Type Sealed, Maintenance Free, Lead-acid

Battery Charging 3 to 6 Hours for Full Charge

Battery Monitoring Advanced Monitoring for Earlier Failure Detection and Warning

Backup Time 7 to 20 Minutes at Full Load; 12 to 40 Minutes and More with Typical Partial Load Depending on Model.

INDICATORS AND CONTROLS

Serial Communications RS-232 Port for Communications

Contact Closures Input Failure, Low Battery

PHYSICAL

Operating Temperature 32 to 104° F (0 to 40° C)

Operating Humidity 0 to 95% RHNC

Conformance Standards IEEE446, NEMA PE1, ANSI C62.41, FCC Class B, IEC 801-146, NSTA

Safety Standards IL 1778, CSA C22.2, VDE

ORDERING GUIDE

Additional Models Available!

STAND ALONE MODELS

Model PRA1000 . . . . . $ 699.00
1000VA, 7-10Min Backup, 120/120VAC In/Out, 57lbs

Model PRA1500 . . . . . $ 879.00
1440VA, 7-10Min Backup, 120/120VAC In/Out, 57lbs

Model PRA2000 . . . . . $ 1499.00
*1920VA, 7-10Min Backup, 120/120VAC In/Out, 96lbs**

*Includes Additional Battery Box Weight of 65lbs

RACK MOUNT MODELS

Model PRR1500A . . . . . $ 1079.00
1440VA, 10Min Backup, 120/120 In/Out, 100lbs

Model PRR1501A . . . . . $ 1479.00
1440VA, 20Min Backup, 120/120 In/Out, 150lbs

Model PRR1502A . . . . . $ 1879.00
1440VA, 40Min Backup, 120/120 In/Out, 175lbs

Model PRR2000A . . . . . $ 1679.00
1920VA, 10Min Backup, 120/120 In/Out, 150lbs

Model PRR2001A . . . . . $ 2079.00
1920VA, 20Min Backup, 120/120 In/Out, 175lbs

OPTIONS

Model PRR-RMK . . . . . $ 179.00
Rack Rails & Hardware to Mount PRR Models in Cabinet

Power Monitor Software for UPS

LanSafe III and FailSafe III software provide two methods for monitoring the performance and availability of your system's backup power. Both packages are fully operational with either the Deltec On-line or Line Interactive UPS systems. LanSafe III is designed for network operations while FailSafe III provides similar power management capabilities for stand-alone PCS.

Faxline Document #:1213

ORDERING GUIDE

Model LS30S2 . . . . . $ 99.00
Network Monitoring for OS/2 V2.0, 2.1. LAN Manager and LAN Server Required

Model LS3NDW . . . . . $ 99.00
Network Monitoring for Novell NetWare 2.15-4.02, DOS 3.3-6.2, and Windows 3.0-3.11

Model LS3NT . . . . . $ 99.00
Network Monitoring for Windows NT 3.1-3.5

Model FS30S2 . . . . . $ 89.00
Stand-alone Power Monitor for OS/2 2.0-2.1, 3.5" Disks

FEATURES

- Stand-alone and LAN/WAN Packages
- UPS Code II Compliant
- Monitor One or All UPS on Net
- Most NOS supported

Model FS3WIN . . . . . $ 69.00
Stand-alone Power Monitor for MS-DOS 3.3-6.2, Windows 3.0-3.11

Model FS3NT . . . . . $ 89.00
Stand-alone Power Monitor for Windows NT 3.1-3.5

Additional Models Available!

One Stop Shopping

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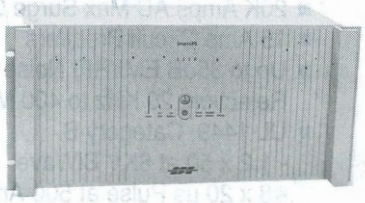
FAX

Stand By UPS System

Model 1250RM



Faxline Document #:1083

FEATURES

- 1250VA/900W Output
- 120VAC or 240VAC Models
- UL, CSA, TUV, VDE, FCC Class A Approved
- 4 ms Transfer Time
- 25 to 120 Minute Backup
- Pure Sine Wave Output
- Rack Mount Configuration

The 1250RM is the latest in the line of UPS systems for off-line requirements. The 1250RM provides up to 1250VA of power within 4 ms, including detection time, of a power outage. Depending on load, backup time can be from 25 minutes to 120 minutes. The pure sine wave output is provided at nominal line power ±5% until the battery low indicator is tripped and at line -10% from that time until the battery is exhausted. Optional software for the 1250RM will log events of the power line and even permit monitoring real time.

Optional Network protection kits available for Netware, LAN Manager, Vines & OS/2

SPECIFICATIONS

Dimensions (H x W x D)	8.72" x 17.0" x 17.8" 196 x 431 x 452mm 19" (483mm) at Front Panel
Weight	Shipping, 65 lbs (29.5kg) Net, 59 lbs (26.8kg)
Line Power	110VAC or 220VAC, Model dependent
Transfer time	4 ms including detection time
Maximum Capacity	1250VA, 900W
On-Battery Output Voltage	Pure sine wave, 115(225)VAC ±5% -10% after low battery warning synchronized to utility line
Transfer Voltage	103(196) transfer to battery 111(213) transfer back to utility User adjustable by dip switches
Power Factor	0.5 to 1.0
Surge Energy Rating	40 Joules, 6500A
Batteries	2ea 12V, 17AH Sealed lead acid, 3-6 yr lifetime
Operating Environment	0 to 45°C, 0 to 95% RHNC Up to 10000 ft (3000m)
Thermal Dissipation	On-Battery, 500 BTU/hr On Utility, 60 BTU/hr

ORDERING GUIDE

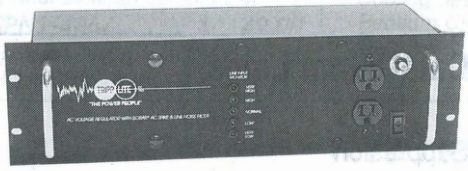
Model 1250RM . . . . . $ 1299.00
Off-line UPS, 900W, 110VAC

Model 1250RM/220 . . . $ 1599.00
Off-line UPS, 900W, 220VAC

Model POWERDOCTOR $ 99.00
Power monitoring software and serial DB-9 F-F interface cable

Line Conditioner/Surge Suppressor

Model LCR-2400



FEATURES

- Rack Mount Design
- 2400W Line Voltage Regulation
- 14 Outlets, NEMA 5-15R
- ISOBAR Surge Suppression
- <5 nSecond Transient Response
- 2 Isolated Filter Banks

ORDERING GUIDE

Model LCR-2400 . . . . . $ 439.00
Line Conditioner, Surge Suppressor

Rack Mount Surge Suppressor

Model IBR-12

FEATURES

- Rack Mount Design
- ISOBAR Surge Suppression
- 12 Outlets, NEMA 5-15R
- <5 nSecond Transient Response
- 2 Isolated Filter Banks

ORDERING GUIDE

Model IBR-12 . . . . . $ 139.00
Rack Mount Surge Suppressor

Line Surge Protection

Full Line of Surge Protection for PC's, Monitors, Modems, FAX's Etc..

Model TT-215

Model TT-215 . . . . . $ 59.00
Two Outlet Surge Protection And Noise Filtering. Plugs into Wall Outlet (Covers One Outlet and Hangs Below Plate), Diagnostic Lights

Model TTM-215 . . . . . $ 79.00
Same as TT-215 With Added Protection for Phone Connections (RJ-45) Such As Modem, Answering Machine, FAX Machine, etc., 4 Foot Phone Cable Included

Model TT-415

Model TT-415 . . . . . $ 69.00
Four Outlet Surge Suppressor, Wall Mount (Covers Two Outlet Receptacle)

Model TTM-415 . . . . . $ 89.00
Same as TT-415 with Added Protection for Phone Line Connections

FEATURES

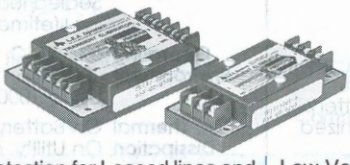
- 20K Amps AC Max Surge Current
- 15 Amp Circuit Breakers
- Up to 35dB EMI/RFI Noise Rejection, 20 KHz to 400 MHz
- UL 1449, Category B
  - 1.2 x 50 at 6KV BiWave
  - 8 x 20 µs Pulse at 500 Amps
  - L-L, L-N and N-G Protection to 330VPeak AC
- Lifetime Warranty!

Model TT-425 . . . . . $ 69.00
Four Outlet on 6 Foot Power Cord

Model TTM-425 . . . . . $ 99.00
Same as TT-425 with Added Protection for Phone Line Connections

Surge Protection for Communications

Model TE2 & TE4



FEATURES

- Three Stages of Protection
- Less Than 5 Nanosecond Response Time
- 5000 Amp Maximum Surge Current
- Self Restoring

Low Voltage Protection for Leased lines and DDS Lines.

Model TE4-200V10-RJFF $ 89.00
Provides RJ-45 Connectors that will Accept RJ-11 Connectors for Leased Lines <56K Baud Rated For 100V Operation.

Model TE4-75V10-B . . . $ 89.00
Provides a Terminal Strip Connection for DDS Lines of <56K Baud Rated for 50V Operation.

Low Voltage Protection for Phone Lines or Data, Used for Two Line Protection on Dial-Up Lines. Protection for Telephone, FAX, Modem, Fire Alarm Panels, Telecom Circuits. Maximum Baud Rate to 19.2K Baud.

Model TE2-200V10-B . . $ 59.00
Provides Terminal Strip Connection. Two Inside Pairs of RJ-45 Protected.

Low Voltage Protection for Computer Communications, Four Wire Circuits for Process Control Instruments on 4-20 mA Current Loop Applications. Rated for 24VDC Powered Control Loops and <56K Baud Communications Rates.

Model TE4-30V1-B . . . . $ 89.00

Transient Eliminators for DataComm Lines

Model TT-550

FEATURES

- 1.2A Surge Current Suppresion
- Easy In-Line Installation
- <5 nanoSecond Response

Low Voltage Protection for Computers and Peripherals Using DB25 Connectors.

Model TE-501 . . . . . $ 89.00
Pins Protected: pins 2-8 and 20

Model TE-502 . . . . . $ 89.00
Pins Protected: pins 2-8, 15, and 17-24

Model TE-503 . . . . . $ 89.00
Pins Protected: pins 1-25

Low Voltage Protection for Telephones, Computer Communications and Modems, RJ-45 Connector In and Out.

Model TE-510/25 . . . . . $ 69.00
Four Line Protector for Dial-Up Lines

Model TE-511/6 . . . . . $ 69.00
Six Line Protector for RS422 Lines

Model TE-512/25 . . . . . $ 89.00
Eight Line Protector for RS232Lines

Model TE-550/LL4 . . . . . $ 99.00
Use for Leased Lines (T-1, E-1 and DDS).

These Units Provide Surge Protection For Network Interfaced PC's.

Model TE-530N-FF . . . . . $ 89.00
Use the TE-530 Inline Between the 'N' Connectors for Ethernet ThickNet (10Base-5) Connections

Model TE-531BNC-MF . $ 99.00
Ethernet ThinNet (10Base-2) In-line Connections

Model TE-531BNC-MFF $ 99.00
ThinNet (10Base-2) T-Connector

Model TE-532RJ45-FF . . $ 99.00
Use the TE-532 Installed Inline Between the Network Connection and the Node for Ethernet Twisted Pair (10-Base-T)

FREE Technical Support

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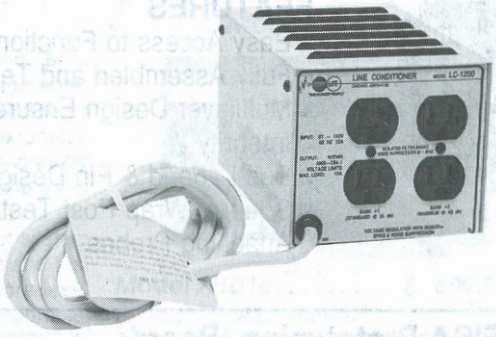
Receive a detailed FAX within Minutes!
FAX

Line Stabilizer/Conditioners

Model LC1200



FEATURES

- 1200W, 1800W & 2400W Models
- Maintain line at 120VAC ±5%
- Spike & RFI Filtration
- <5 nSecond Transient Response

ORDERING GUIDE

Model LC1200 . . . . . $ 239.00
4 Outlet, 1200W

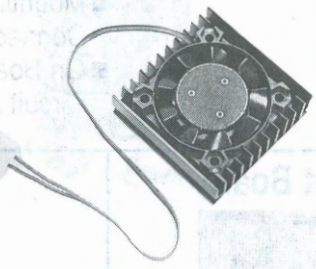
Model LC1800 . . . . . $ 319.00
6 Outlet, 1800W

Model LC2400 . . . . . $ 389.00
6 Outlet, 2400W

CPU Coolers

Model SPN1-486

Today's fast 486 50Mhz, 50/66Mhz Doubler and Pentium CPU chips run very hot! Even in our heavier duty chassis with extra cooling power, operating temperatures of these CPU chips may reach levels that will impact the MTBF of your system. In environments with greater than 40°C temperatures, we recommend installation of one of these coolers on your CPU chip.



FEATURES

- Cools Hot Running 486 Chips & Pentium CPUs
- Quiet, 23dB, Operating Fan
- Recommended for >40°C Environments

Faxline Document *#:1068

ORDERING GUIDE

Model SPN1-486 . . . . . $ 49.00
Cooling heat sink/fan combination

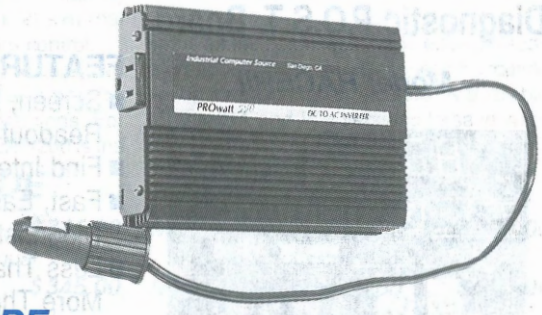
Model SPN1-486Z . . . . . $ 49.00
Cooling heat sink/fan combination for 486 CPU in ZIF socket

***Model SPN1-586Z** . . . . . $ 49.00
Cooling heat sink/fan combination for Pentium CPU in ZIF socket

Model SPN1-586CL . . . . $ 49.00
For Pentium CPU in Low Insertion Force "Socket 5"

12VDC to 115VAC Inverters

Model DC250W



FEATURES

- 10 to 15VDC Input
- 115VAC, 60Hz Modified Sine Wave Output
- 125W, 250W, 800W Models
- Plug for Cigarette Lighter

ORDERING GUIDE

Model DC125W . . . . . $ 129.00
125W Output

Model DC250W . . . . . $ 239.00
250W Output

Model DC800W . . . . . $ 559.00
800W Output

Diagnostic & Development Boards

EXPRESS SOURCE-BOOK FAXLINE
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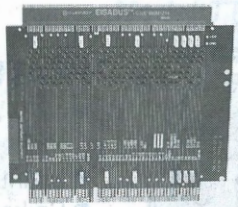
Receive a detailed FAX within Minutes!
FAX

EISA Bus Extender

Model 3690-32



FEATURES

- Easy Access to Functioning Boards for Testing
- Fully Assembled and Tested
- Multilayer Design Ensures Signal-Handling Integrity
- Bus Legend & Pin Designations Printed On Board
- Square, Wrap Post Test Points for Wiring or Attaching Probes

ORDERING GUIDE

Model 3690-32 ..... $ 320.00

EISA Prototyping Board

Model 4619-3

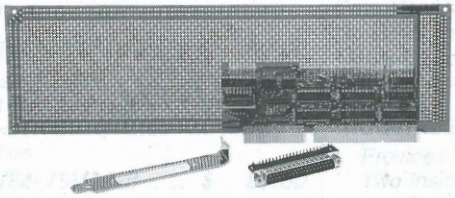
FEATURES

- Accepts DIPs, PGAs, PLCCs, Most Component Geometrics
- Multilayer Design Ensures Signal Handling Integrity
- Mounting Area For D-sub and Ribbon Header Connectors
- On-Board I/O Break Out Field at Connector For Circuit Analysis

ORDERING GUIDE

Model 4619-3 ..... $ 195.00

Buffered Development Board

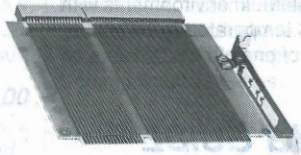


Prototype development board, full size (10") 254mm, plugs directly into the IBM. Buffered IC connections. I/O connections on the board. Ground and power planes are on both sides of the board. I/O or Memory Mapped selection.

ORDERING GUIDE

Model PB751-AT ..... $ 99.00

IBM Extender Board



An extender board for special work requiring board adjustment during operation. Strong enough to support a full size board making difficult adjustments easier.

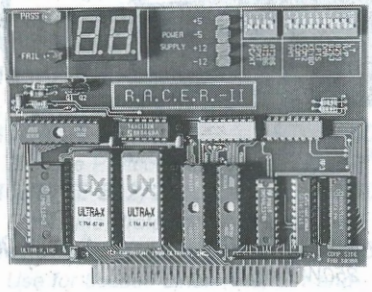
ORDERING GUIDE

Model EXB21 ..... $ 39.00
Model EXB21/AT ..... $ 65.00

Diagnostic P.O.S.T. Board

Faxline Document #:1174

Model RACERII



The RACERII is a plug-in diagnostic board for failure evaluation in malfunctioning 8088 through 80486 PC-Bus systems. Simply install the board, RACERII BIOS ROMs, and apply power. The RACERII will diagnose all system parameters, display results and log out to a local printer. On-board LED's indicate the test in progress and PASS/FAIL results even if the system monitor will not come up.

FEATURES

- Screen, LED or Printer Readout
- Find Intermittent Faults Easily
- Fast, Easy Precision Diagnostic
- Less Than 5 Minutes to Run More Than 70 Tests

ORDERING GUIDE

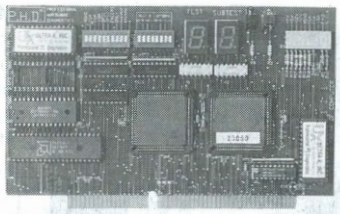
Model RACERII ..... $ 499.00
Diagnostic board, BIOS ROMs, Manual

Diagnostic Board Software & Extender Card

Advanced 16-Bit Diagnostic Card

Model PHD16

The Model PHD16 is an advanced 16-Bit diagnostics card that offers engineers, developers, service technicians, and other PC industry professionals an extensive range of tests and features to quickly troubleshoot component-level failures in 286, 386, 486, and Pentium computers. The board uses a minimum amount of system functions, thus allowing it to start and test computers even if virtually all core-level components are missing or are inoperable.



Model PHD16 . . . . . $ 699.00
Board, ROMs, manual

FEATURES

- Full ISA Bus Testing
- Complete DMA & Interrupt Testing
- Component-Level Diagnostics in 286/386/486 & Pentium Computers
- P.O.S.T. Monitoring
- Supports Newer Motherboards with Intergrated Chipset Designs

Diagnostic Software

Model QUICKTECH-PRO

QUICKTECH-PRO is an easy to use, comprehensive software diagnostic program that allows you to quickly test major components and functional areas of any PC/XT/AT and Pentium compatible computer. Using its advanced diagnostics you can quickly troubleshoot malfunctioning systems, isolate random failures (such as base or extended RAM problems), or perform system maintenance before problems occur. The program offers a variety of tests, including base, extended, cache, and video RAM; floppy and hard drive tests and utilities; keyboard and mouse tests; parallel and serial port tests; monitor and video board tests; CPU, video and hard drive throughput analysis and performance evaluations; and many more.

Model QUICKTECH-PRO $ 195.00
Software, loopback plug, manual

FEATURES

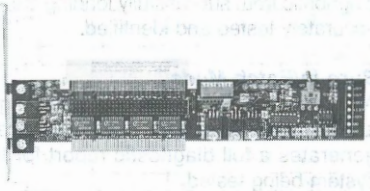
- Performs Low-Level, Core Analysis and Testing of Critical System Functions Including CPU, and External and Internal Caches
- Provides Information on, and Tests all Major System Areas and Components
- Burn-In Mode for Exhaustive Testing of New or Repaired Systems or Components
- Exhaustive Testing of all Types of Hard Drives

PCI, EISA & ISA Switched Extender Cards

Model SMARTEXT/PCI-5

The SMART Series of extenders allows testing of boards in a PC without having to turn the power on and off to change boards. This eliminates repeated rebooting which speeds up testing. It also prolongs the system life including reduced wear and tear on hard disks. There are three ways to control the power on a SMART Extender; 1) the mechanical toggle switch, 2) external control signal, or 3) by software control.

There are five versions of the card, two PCI bus cards, (one for 5V and one for 3.3V), an EISA and two ISA versions. For the ISA versions, the SMARTEXT/200 is the same as the SMARTEXT/150 except it adds a breadboard area for user specific circuitry. An optional connector extender is available for the ISA and PCI versions to save wear and tear on the card's connector.



FEATURES

- Swap Board-Under-Test Without Turning Off Power
- Functions Under Program Control if Desired
- Bank Switches Allow Selective Signal Isolation
- All Voltages are Current Limited

ORDERING GUIDE

Model SMARTEXT/PCI-5 . $345.00
5V & universal board, manual

Model SMARTEXT/PCI-3 . $345.00
3.3V & universal board, manual

Model SMARTEXT/PCI-64 $365.00
64-bit PCI Bus

Model SMARTEXT/VLB . . $395.00
VL Bus Extender

Model SMARTEXT/EISA . . $ 395.00
EISA bus version, manual

Model SMARTEXT/150 . . $ 295.00
ISA version, manual

Model SMARTEXT/200 . . $ 345.00
ISA version with breadboard area, manual

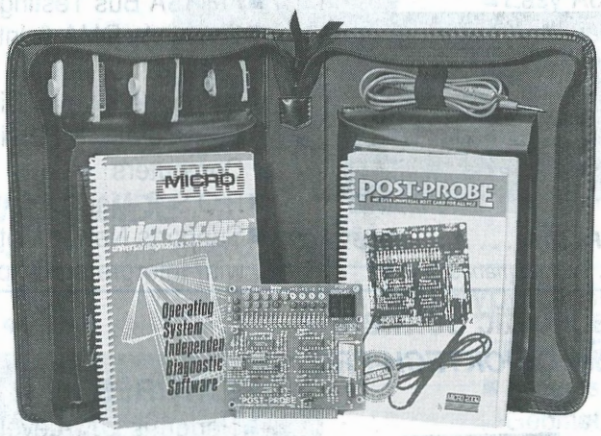
Model MINIEXT . . . . . $ 40.00
Extended connector for ISA versions only

Model MINIEXT/PCI-5 . . $ 70.00
Extended connector for 5V PCI

Model MINIEXT/PCI-3 . . $ 70.00
Extended connector for 3V PCI

Universal Diagnostic Software
with P.O.S.T. Probe

Model MICRO-TOOLKIT



FEATURES

- Low-Level Format
- Cache Memory Testing
- Unlimited Memory Testing/ Video Memory Testing
- True Hardware Diagnostics
- Error Logging/Auto Mapping
- IRQ Display/IRQ Check
- Restore Master Boot Record

The Model MICRO-TOOLKIT contains the new MICROSCOPE diagnostic software and the POST-PROBE P.O.S.T., card that allows debugging of any "dead" PC! Micro-Scope Universal Computer Diagnostics was developed to satisfy the expanding need for accurate system diagnosis. MICROSCOPE runs independently of any standard operating system.

MICRO-SCOPE FEATURES

Low-Level Format
Performs low-level format on all drive types, MFM, RLL, ESDI, SCSI, and even all IDE drives. This includes factory type initialization of all IDE drives, as well as true factory style format routines.

Operating System Independent
Uses a proprietary operating system, specifically designed for hardware diagnostics. This allows laser sharp accuracy in all tests, because it entirely eliminates the MS-DOS translation and masking which results in inaccuracies common to all MS-DOS based diagnostic products.

Diagnostics at the Hardware Level
100% accurate testing of CPU, IRQs, DMAs, all memory, hard drives, floppy drives, video adapter and memory, serial and parallel ports, etc.

Cache Memory Testing
The only diagnostic available which tests cache memory. Automatically and accurately tests all cache memory, regardless of the size of cache on the machine being tested, and includes complete testing of the cache memory subsystem as well.

Unlimited Memory Testing
Tests all base, extended, and expanded memory accurately, regardless of size.

Video Memory Testing
Accurately tests video memory far beyond the MS-DOS limitation of 256k.

Low Memory Testing
Memory can be tested without loading the diagnostic program, so even errors in low memory which would prevent any other diagnostic from successfully loading can be accurately tested and identified.

Burn-in/Batch Mode
Allows continuous or pass bound running of any test or series of tests, and automatically generates a full diagnostic report for the system being tested.

The POST-Probe card included will function in any PC compatible that emits POST codes, ISA, EISA, and MCA. Pads are provided for actual voltage testing under load. There are also LEDs to monitor +5, -5, +12, and -12 VDC. The comprehensive manual has POST codes covering AMI, AWARD, COMPAQ, IBM, MR BIOS, PHOENIX, and QUADTEL.

POST-PROBE FEATURES

- Includes pads for a voltmeter to attach for actual voltage testing under load.
- Monitors Hi and Lo clock and OSC cycles to distinguish between clock chip or crystal failure.
- Monitors I/O write and I/O read to distinguish between write and read errors.
- Monitors memory write/read to distinguish between address line failures and memory chip failures.
- Monitors ALE for proper CPU/DMA operation.
- Monitors Reset to determine if reset is occurring during POST, indicating a short.
- Monitors progress of POST *without* POST codes.
- Dip switch allows easy selection of I/O ports to read.

The manual is laid out in such a way that on the left side of the page appear the POST Codes with what test failed next to it and on the facing page, aligning these data, two further sections on 1, what would cause that failure and 2, a Trouble-Shooting section that has any major chips, their descriptions and the pinouts for these chips so that the user can then make use of the Logic Probe and test for actual chip failure.

ORDERING GUIDE

Model MICRO-TOOLKIT $ 850.00
Board, logic probe, software, manual, text, carrying case; Includes both packages

Model MICROSCOPE . . $ 475.00
Includes microscope only

Model POST-PROBE . . . $ 375.00
Includes post-probe only

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FAX

Communication Cards
Selection Table

INDUSTRIAL COMPUTER SOURCE offers the broadest range of communications adapters to meet your needs. There are cards from a single channel to 16 channels with many different interface types supported, RS-232, RS-422, RS-485, RS-530, V.35, 20mA current loop, and a multiport card with serial and parallel ports. Both asynchronous and synchronous protocols are supported.

Many of the cards are almost "plug-and-play". They simply require setting the address/IRQ switches, possibly loading a driver and you're up and running. These are cards such as the SPC20, RS422AT-P, L20MA, or the WINCOMM4. There are also cards for the developer/OEM who needs sophisticated communications in his/her system. These boards allow downloading custom drivers to the card for special applications or creating custom EPROMs that plug onto the card. Boards in this category are the ACL series and the ACB series.

Industrial Computer Source strives to provide you with the right choice for your application. If you have a special application not covered by these cards, in many cases, we can provide you with a custom product to meet your needs. Just contact one of our sales applications engineers with your requirements.

Model	Page Number	Faxline Document # Faxline	Ports	RS422/232	Baud Rates	UART	Microprocessor	RAM/EPROM	Dual Port RAM	Protocols Supported	Interrupts	Shared Interrupts	DMA Channel	I/O Address Requirements	COM1-COM4 Capable	MS-DOS	WINDOWS NT	WINDOWS	SCO-XENIX	BASIC	PASCAL	C	Utilities Disk
ACB104	52	1285	1	RS232/422/485	50-1.2MB	8530	-	-	-	sync/async	XT 1 of 5	x	1/3 [13]	8 bytes	No	x				x		x	x
ACB2	115	1084	1	RS422/232 [6]	50-1.2M [14]	8530	-	-	-	sync/async	XT 1 of 2	-	1/3 [13]	8 bytes	No	x			x2	x		x	x
ACB3	115	1030	2	RS232	50-1.2M [14]	8530	-	16K/128K EPROM	-	sync/async	XT 1 of 4	-	1/3 [13]	8 bytes	No	x			x2	x		x	x
ACB3/SP	115	1030	1	RS232	50-1.2M [14]	8530	-	-	-	sync/async	XT 1 of 4	-	1/3 [13]	4 bytes	No	x			x2	x		x	x
ACB4	115	1029	2	RS422/485/530	50-1.2M [14]	8530	-	16K/128K EPROM	-	sync/async	XT 1 of 4	-	1/3 [13]	8 bytes	No	x			x2	x		x	x
ACB4-AT	115	1028	2	RS232/V.35	50-1.2M [14]	8530	-	16K/128K EPROM	-	sync/async	XT 1 of 4	-	1/3 [13]	8 bytes	No	x			x2	x		x	x
ACB5	call	1027	2	RS232/V.35	50-1.2M [14]	8530	-	16K/128K EPROM	-	sync/async	XT 1 of 4	-	1/3 [13]	8 bytes	No	x			x2	x		x	x
ACL-4(8)	call	-	4/8	RS232 [1]	50-38.4K	2681	8088	32K	64K	async	XT 1 of 6	-	-	4 Settings via DIP switch (4bytes)	No	x		x	x1	x		x	x3
ACL-8-II+	call	-	8	RS232 [1]	50-115.2K	2681	80183	32K	64K	async	AT 1 of 8	-	-	2 locations / setting. 4 setting board	No	x		x	x1	x		x	x3
ACL-8-IIR+	call	-	8	RS232	50-115.2K	2681	80188	32K	64K	async	AT 1 of 8	-	-	2 locations / setting. 4 setting board	No	x		x	x1	x		x	x3
ACL-16-PH+	call	-	16	RS232 [1]	50-115.2K [3]	2692	80186	2-64K	16K	async	AT 1 of 8	-	-	4 setting	No	x		x4		x		x	x3
ACL-16-FH+	call	-	16	RS232	50-115.2K [3]	2692	80186	2-64K	16K	async	AT 1 of 8	-	-	4 setting	No	x		x4		x		x	x3
AV100E	call	-	8/16	RS232 [20]	50-115K	CD1400	80186	64K	32K	async	AT 1 of 8	x [21]	-	-	No	x		x4	x				x3
AV100I	call	-	8/16	RS232 [20]	50-115K	CD1400	80186	64K	16K	async	AT 1 of 8	x [21]	-	-	No	x		x4	x				x3
COMM4AT	call	1019	4	RS232	50-56K	16550	-	-	-	async	AT 1 of 9	x	-	32 bytes	Yes	x		x	x2				x3
FASTCOM/HSCX	call	1035	1	RS422/485/530	50-4M	82526	-	-	-	sync [7]	AT 1 of 10	x	1,3,5,7[22]	34 bytes	No	x	x5	x				x	x
FASTCOM/IG232	call	1089	1[2]	RS232	50-115.4	16C550	-	-	-	async	XT 1 of 6	x	-	8 bytes	Yes	x	x	x	x	x		x	x
FASTCOM4	call	-	4	RS232	50-288K	82510	-	-	-	async	XT 1 of 6	x	-	32 bytes	No	x			x2	x	x	x	
FASTCOM4W	112	1038	4	RS232	50-256K [4]	16C550	-	-	-	async	XT 1 of 6	x	-	32 bytes	Yes [10]	x	x	x	x	x		x	x
FASTCOMM422/4	112	1037	4	RS422/485	50-288K	82510	-	-	-	async	AT 1 of 10	x	-	32 bytes	No	x	x	x	x	x		x	x
FASTCOM/422	112	-	1[2]	RS422/485	50-288K	82510	-	-	-	async	XT 1 of 6	x	-	8 bytes	Yes	x	x	x	x	x		x	x
FASTCOM8	111	1036	8	RS232	50-256K [4]	16C550	-	-	-	async	AT 1 of 10	x	-	64 bytes	No	x	x	x	x	x		x	x
FASTCOM/LPT-DP	call	1034	2	Parallel	-	-	-	-	-	-	XT 1 of 6	x	-	6 bytes	No	x	x	x	x	x		x	x
FP104	52	1286	4	RS232/422/485	50-??	16554	-	-	-	async	XT 1 of 5	x	-	32 bytes	Yes	x		x		x		x	x
L20MA	call	1076	1	20mA TTY Current Loop/RS232	50-256K [4]	16C550	-	-	-	async	XT 1 of 6	x	-	8 bytes	Yes	x	x	x	x	x		x	x
ONE-SLOT	110	-	4[19]	RS232	50-115K	Custom	-	-	-	async	AT 1 of 8	-	-	-	Yes	x		x	x				
ROCKETPORT	110	1100	32[18]	RS232/422	50-230K	Custom	-	-	-	async	AT 1 of 8	-	-	-	No	x		x	x				
RS422AT-P	114	1129	1	RS422	50-56K	16450	-	-	-	async	XT 1 of 6	-	-	4 bytes	Yes	x		x	x2	x	x	x	
RS422I-P	114	1128	1	RS422	50-56K	16450	-	-	-	async	XT 1 of 6	-	-	4 bytes	Yes	x		x	x2	x	x	x	
SP104	52	1286	1	RS232/422/485	50-115K	16450	-	-	-	async	XT 1 of 5	x	-	8 bytes	Yes	x		x		x		x	x
SPC20	113	-	3	2S/1P/1G [11]	50-19.2K	16450	-	-	-	async	XT 1 of 4 [12]	-	-	8 bytes [15]	Yes	x		x	x2				x
SPRT2A/AT	113	1067	2	RS232/422/485	50-256K [4]	16550	-	-	-	async	XT 1 of 4	x	-	8 bytes	Yes	x		x	x2	x	x	x	x
SPRT2B/AT	113	1067	2	RS232/422/485	50-256K [4]	16550	-	-	-	async	AT 1 of 9	x	-	8 bytes	Yes	x		x	x2	x	x	x	x
TURBOPORT	111	1167	1/2	RS232	50-460.8	16650	-	-	-	async	AT 1 of 8	x	-	8 bytes	Yes	x		x					
ULTRA-485	114	1152	1	RS422/485 [17]	50-115.2K	16550	-	-	-	async	AT 1 of 10	x	-	8 bytes	Yes	x		x					x
WDT1000-P	call		1	RS422/485	50-9600	16450	-	-	-	async	-	-	-	8 bytes	Yes	x		x	x2	x	x		x
WINCOMM4	109	1070	4	RS232	50-56K	16550	-	-	-	async	AT 1 of 9 [8]	x	-	8 bytes [9]	Yes	x		x	x2				x
WINCOMM8	109	1073	8	RS232	50-56K	16550	-	-	-	async	AT 1 of 10 [9]	x	-	64 bytes	Yes [18]	x		x	x2				x

NOTES

[1] RS422/RS485 available.
[2] Second port optional.
[3] Up to 24k baud simultaneous throughput.
[4] Above 115k requires crystal change (customer supplied).
[5] HS version uses 82510 UART and 50-288K baud rate.
[6] Driver IC's included to convert to RS232.
[7] Sync protocols include SDLC, HCLC, X.25, et al.
[8] Can have different IRQ for each port.
[9] Can have different address for each port.
[10] With Windows PAL included.
[11] 2 Serial ports, 1 Parallel port and 1 Game port.
[12] Serial ports have IRQ's 2,3,4, & 5, parallel uses either IRQ 5 or 7.
[13] Can be set for half duplex on 1 channel or full duplex using 2 channels.
[14] Max rate depends upon the system configuration. DMA capability is up to 288K baud.
[15] Each port requires 8 bytes.
[16] Requires PAL option.
[17] Works with Windows, OS/2, DOS and Windows NT
[18] There are 4, 8, 16 and 32 channel versions.
[19] Also contains 3 parallel ports.
[20] RS-422 version available.
[21] Only shares interrupt with another AV100E.
[22] Uses 2 or 0 channels.

SOFTWARE NOTES

x1 Requires special order driver (free upon request).
x2 User programming required.
x3 Optional developers disk available for those wishing to write their own driver to replace the one provided.
x4 8 ports only.
x5 Windows NT driver available on request.

Analog–Digital–I/O Card
Selection Table

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Model	Page Number	Faxline Document # Faxline #	Resolution	ANALOG INPUT							
				Number of Channels		Conversion Speed	Throughput	Programming Gains/Ranges	Input Ranges		
				SE	DF				Bipolar	Unipolar	Gains
16ISO	call	1003	-	-	-	-	-	-	-	-	-
16REL	103	1003	-	-	-	-	-	-	-	-	-
AD12-8	106	1121	12bit	8		25µs	30k	-	±5, 10	0-10	-
AIO16F-P	call	-	12bit	16	8	8.5µs	100k	-	±5, 1, 2.5, 5, 10	0-1, 2, 5, 10	.5, 1, 2, 5, 10
AIO16-P	call	-	12bit	16	8	15µs	50k	-	±5, 1, 2.5, 5, 10	0-1, 2, 5, 10	.5, 1, 2, 5, 10
AIO32M-B	call	1276	12bit	16	8	2µs	400k	Y	±2.5, 5, 10	0-2.5, 5, 10	-
AIO32-B	call	1276	12bit	16	8	2µs	400k	Y	±2.5, 5, 10	0-2.5, 5, 10	-
AIO36M-B	call	1168	16bit	16	8	5µs	200k	Y	±2.5, 5, 10	0-2.5, 5, 10	-
AIO36-B	call	1168	16bit	16	8	5µs	200k	Y	±2.5, 5, 10	0-2.5, 5, 10	-
AIO8G-P	call	-	12bit	8	8	25µs	20k	Y	±.01, .05, .5, 5, 10	0-.02, .1, 1, 10	-
AIO8-P	call	-	12bit	8	-	25µs	20k	-	±5	-	-
AOB12	107	-	-	-	-	-	-	-	-	-	-
AOB16/12	107	1280	-	-	-	-	-	-	-	-	-
AOB2-P	107	1155	-	-	-	-	-	-	-	-	-
AOB6-P	107	-	-	-	-	-	-	-	-	-	-
AOB8(16)/16	107	1122	-	-	-	-	-	-	-	-	-
AT16-P	call	-	-	-	-	-	-	-	-	-	-
CS220L	call	1078	8bit	2	-	-	7MHz*	Y	±.2, 1	-	-
CS225	call	1164	8bit	2	-	-	25MHz*	Y	±.1, .2, .5, 1, 5	-	-
CS250	call	1077	8bit	2	-	-	50MHz*	Y	±.1, .2, .5, 1, 5	-	-
CS1012	call	1018	12bit	2	-	-	20MHz*	Y	±.1, .2, .5, 1, 5	-	-
CS6012	call	1165	12bit	2	-	-	30MHz*	Y	±.1, .2, .5, 1, 5	-	-
DCC10-P	104	1179	-	-	-	-	-	-	-	-	-
DCC20-P	104	1179	-	-	-	-	-	-	-	-	-
DCC5-P	104	1179	-	-	-	-	-	-	-	-	-
DIO16	call	1045	-	-	-	-	-	-	-	-	-
DIO216	call	-	-	-	-	-	-	-	-	-	-
DIO24-P	101	1144	-	-	-	-	-	-	-	-	-
DIO32B	call	1092	-	-	-	-	-	-	-	-	-
DIO48I	102	1176	-	-	-	-	-	-	-	-	-
DIO48S/AT-P	103	1125	-	-	-	-	-	-	-	-	-
DIO8-P	101	1145	-	-	-	-	-	-	-	-	-
IAI-4000	call	1277	12bit	-	4	167µs	6k	-	±5, 10	0-1, 5, 10	(I Rgs: 0-20mA, 4-20mA)
LC16-50	call	1181	12bit	16	8	20µs	50k	Y	±5, 10	-	1, 2, 4, 8
LC16-125	call	1181	12bit	16	8	8µs	125k	Y	±5, 10	-	1, 2, 4, 8
LVDT8-P	call	1278	-	-	-	-	-	-	-	-	-
ML16-P	105	-	8bit	16	8	60µs	16.67k	Y	±.128, 5	0-.255, 10	
ML8-P	105	1154	8bit	8	-	20µs	-	-	±5	-	
MSI601-U	call	-	14bit	16	8	40µs	20k	Y	±10.24	-	1, 2, 4, ... 1024
MSI607	call	-	14bit	16	8	100µs	5k	Y	±10.24	-	1, 2, 4, ... 1024
MSI608-U	call	-	14bit	16	8	40µs	20k	Y	±10.24	-	1, 2, 4, ... 1024
PCA3/PCA4	call	-	-	-	-	-	-	-	-	-	-
PCDIO216-P	100	1143	-	-	-	-	-	-	-	-	-
PCDIO120-P	100	1143	-	-	-	-	-	-	-	-	-
PCDIO24-P	100	1143	-	-	-	-	-	-	-	-	-
PCDIO48-P	100	1143	-	-	-	-	-	-	-	-	-
PCDIO72-P	100	1143	-	-	-	-	-	-	-	-	-
PC30-D	call	1279	12bit	16	-	7.6µs	200k	-	±5	0-10	-
PC-73	call	-	12bit	-	8	33ms	30	-	±4.095	-	1, 100, 200, 500
RTI-800/815	call	1149	12bit	16	8	25µs	27Khz	Y	±5, 10	0-10	1, 10, 100, 500
RTI-820	call	1148	12bit	1	-	25µs	19Khz	-	±5	-	-
WIN-30D	call	1071	12bit	16	-	-	1MHz	Y	±5	0-5	-

(*** = 8 isolated inputs, 8 relays; **** = 16 isolated inputs. 16 relays; ***** = 8 isolated relays)

Free Technical Support

Analog–Digital–I/O Card
Selection Table

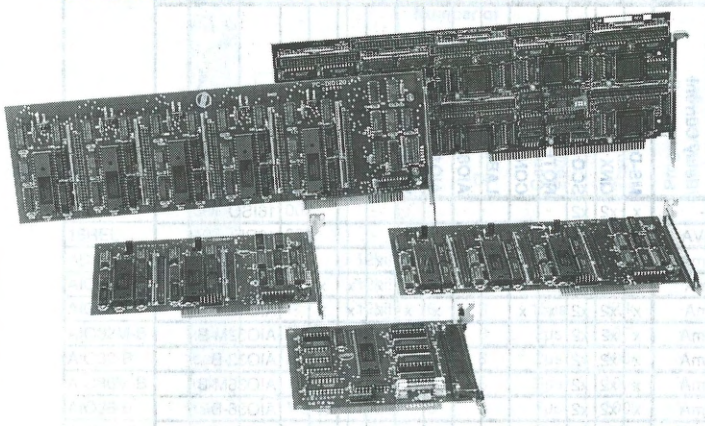
ANALOG OUTPUT					DIGITAL			Software Compatibility and/or Drivers/Sample Programs													
Channels	Output Ranges		Resolution	Settling Time	Counter/Timers	Number of I/O Lines	Output Sink /Relay Current	MS-DOS	QNX	SCO XENIX	NOTEBOOK/PRO	CONTROL/PRO	LABLOG	AIO8LINX(VB)	AIO16LINX(VB)	WINDOWS	BASIC	PASCAL	C	FORTRAN	Model
	Bipolar	Unipolar																			
-	-	-	-	-	-	16ISO	-	x	x2	x2											16ISO
-	-	-	-	-	-	16 Relays	10VA	x	x2	x2											16REL
-	-	-	-	-	3	16	24mA	x	x2	x2	x	x				x	x				AD12-8
2	-	0-5	12bit	2µs	3	4I/4O	8mA	x	x2	x2	x	x			x	x	x	x	x		AIO16F-P
2	-	0-5	12bit	2µs	3	4I/4O	8mA	x	x2	x2	x	x			x	x	x	x	x		AIO16-P
2	±5, 10	0-5, 10	12bit	5µs	1	16	24mA	x	x2	x2									x		AIO32M-B
2	±5, 10	0-5, 10	12bit	5µs	1	16	24mA	x	x2	x2									x		AIO32-B
2	±5, 10	0-5, 10	12bit	5µs	1	16	24mA	x	x2	x2									x		AIO36M-B
2	±5, 10	0-5, 10	12bit	5µs	1	16	24mA	x	x2	x2									x		AIO36-B
-	-	-	-	-	3	4I/4O	8mA	x	x2	x2	x	x					x	x	x		AIO8G-P
-	-	-	-	-	3	4I/4O	8mA	x	x2	x2	x	x		x		x			x		AIO8-P
12	±5, 10	0-5, 10	12bit	<2µs	-	-	-	x	x2	x2	x	x						x			AOB12
16	±2.5, 5, 10	0-2.5, 5, 10	12bit	8µs	-	-	-	x	x2	x2	x	x				x	x	x	x		AOB16/12
2	±5, 10	0-5, 10	12bit	4µs	-	-	-	x	x2	x2	x	x					x	x	x		AOB2-P
6	±2.5, 5, 10	0-5, 10	12bit	50µs	-	-	-	x	x2	x2	x	x					x		x	x	AOB6-P
8/16	±5, 10	0-5, 10	16bit	8µs	-	-	-	x	x2	x2	x	x					x		x	x	AOB8(16)/16
-	-	-	-	-	-	-	-	x													AT16-P
-	-	-	-	-	-	-	-	x								x	x1		x1		CS220L
-	-	-	-	-	-	-	-	x								x	x1		x1		CS225
-	-	-	-	-	-	-	-	x			x	x				x	x1		x1		CS250
-	-	-	-	-	-	-	-	x								x	x1		x1		CS1012
-	-	-	-	-	-	-	-	x								x	x1		x1		CS6012
-	-	-	-	-	10	-	-	x	x2	x2	x	x					x		x		DCC10-P
-	-	-	-	-	20	-	-	x	x2	x2	x	x					x		x		DCC20-P
-	-	-	-	-	5	-	-	x	x2	x2	x	x					x		x		DCC5-P
-	-	-	-	-	-	***	4mA	x	x2	x2	x	x									DIO16
-	-	-	-	-	-	216	4mA	x	x2	x2	x	x					x				DIO216
-	-	-	-	-	-	24	1.7mA	x	x2	x2	x	x									DIO24-P
-	-	-	-	-	-	****	10VA	x	x2	x2											DIO32B
-	-	-	-	-	-	48diff	-	x	x2	x2						x	x	x	x		DIO48I
-	-	-	-	-	-	48	15mA	x	x2	x2						x	x	x	x		DIO48S/AT-P
-	-	-	-	-	-	*****	2A	x	x2	x2							x		x	x	DIO8-P
-	-	-	-	-	-	-	-	x	x2	x2							x		x	x	IAI-4000
2	±5	-	12bit	10µs	3	16	TTL	x			x	x						x	x		LC16-50
2	±5	-	12bit	10µs	3	16	TTL	x			x	x						x	x		LC16-125
-	-	-	-	-	-	-	-	x	x2	x2	x	x									LVDT8-P
2	±10		8bit	30µs	3	8I/8O	24mA	x	x2	x2			x			x	x	x	x		ML16-P
-	-	-	-	-	-	3I/4O	8mA	x									x		x		ML8-P
-	-	-	-	-	-	-	-	x									x				MSI601-U
2	±10	4-20mA	12bit	7µs	2	16	8mA	x									x				MSI607
2	±10	4-20mA	12bit	7µs	2	16	8mA	x									x				MSI608-U
-	-	-	-	-	-	8	-	x								x	x3				PCA3/PCA4
-	-	-	-	-	-	216	24mA	x	x2	x2	x	x					x				PCDIO216-P
-	-	-	-	-	-	120	24mA	x	x2	x2	x	x					x				PCDIO120-P
-	-	-	-	-	-	-	-	x	x2	x2	x	x					x				PCDIO24-P
-	-	-	-	-	-	-	-	x	x2	x2	x	x					x				PCDIO48-P
-	-	-	-	-	-	-	-	x	x2	x2	x	x					x				PCDIO72-P
4	±10	0-10	8/12	-	1	24	2.5mA	x	x2	x2	x	x					x		x		PC30-D
-	-	-	-	-	-	-	-	x								x	x	x	x	x	PC-73
2‡	±10	0-10	12bit	20µs	3	8I/8O	8mA	x								x					RTI-800/815
1	±5V	0-5V	12bit	20µs	-	24	23mA	x								x					RTI-820
4†	±6V	-	16/12	-	-	24	1.7mA	x								x					WIN-30D

Software Compatibility and/or Driver Sample Programs

x1 = Requires advanced software library
x2 = User programming required
x3 = Visual Basic

Digital I/O Family

Models PCDIO24/48/72/120/216-P



FEATURES

- XT/AT Compatible
- Isolation Rack Pin Compatible
- Buffered TTL I/O Lines: Source 18 mA, Sink 24 mA
- Selectable Bus Address
- 5 Models to fit Your Requirements!

LIFETIME GUARANTEE!

Faxline Document #:1143

The Industrial Computer Source Buffered Digital I/O family includes five boards providing a selection of capacities. All boards share common engineering features. The heart of the digital function is the 8255 I.C., which provides bidirectional digital functions of 24 channels per chip.

Buffering is added to the circuitry to provide the high sinking current capabilities of these boards. This additional capacity is what makes the boards optimally compatible with isolation relay racks such as the PB24 or other compatible racks such as OPTO22. The boards will interface pin-to-pin with the PB24, PB16A or the PB8 Relay Racks using the CAB50-6 or CAB50-10 cables.

SPECIFICATIONS TABLE

Model	Number of Lines	I/O Space	Connector Type: 50-pin Header Connector per 8255 chip	Power Required	Size
PCDIO24-P	24	4 I/O Bytes	1	+5VDC @ 0.5A	5.5" (140mm)
PCDIO48-P	48	8 I/O Byte	2	+5VDC @ 0.7A	6.75" (171mm)
PCDIO72-P	72	12 I/O Bytes	3	+5VDC @ 0.85A	9" (229mm)
PCDIO120-P	120	20 I/O Bytes	5	+5VDC @ 1.0A	13.25" (336mm)
PCDIO216-P	216	36 I/O Bytes	9	+5VDC @ 1.5A	13.3" (338mm)

COMMON SPECIFICATIONS

DIGITAL I/O

Logic Controller: 8255
Logic: Positive True
Output Flow: Logic 0 = 0-0.8VDC
Sink Current: 24mA per channel
Output High: Logic 1 = 2.3-5.0VDC
Source Current: 15mA per channel

PHYSICAL

Temperature Range: Operating: 0 to +60° C
Relative Humidity: 5 to 95% RHNC

ORDERING GUIDE

Model PCDIO24-P .... $ 125.00
Model PCDIO48-P .... $ 199.00
Model PCDIO72-P .... $ 275.00
Model PCDIO120-P ... $ 350.00
Model PCDIO216-P ... $ 475.00

Interconnect to PB or PBSM Relay Racks, Call for more information

SCREW TERMINATIONS & CABLE

Model UTB-K ..... $ 120.00
Termination board/Metal enclosure
Model UTB ..... $ 80.00
Termination board
Model 2M50FC ..... $ 59.00
Termination board for TTL only
Model CAB50A-6 ..... $ 40.00
6' (1.83 m) cable for termination board
Model 2TK2D-6 ..... $ 3.00
6" section of SNAPTRAK
Model TKAD ..... $ 2.00
Din rail mounting clips for SNAPTRAK (2 required)

CABLES FOR RELAY RACKS, PB SERIES

Model CAB50-10 ..... $ 50.00
Model CAB50-6 ..... $ 40.00

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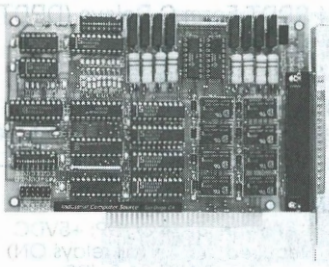
Isolated Relay & 24 Digital I/O Board

Model DIO8-P



Faxline Document #:1145

FEATURES

- 8 Electro-Mechnical Relay Outputs
- 8 Optically Isolated Inputs – AC or DC!
- 500V Isolation
- Input Circuit Filters

LIFETIME GUARANTEE!

Designed for control and sensing applications, the DIO8-P provides 8 electro-mechanical relay outputs and 8 optically isolated inputs. The DIO8-P can be used in various applications including load switching, external switch input sensing, contact closure and external voltage sensing.

SPECIFICATIONS

ISOLATED INPUTS

Type	Non-polarized, opto-isolated (Not TTL/ CMOS compatible)
Voltage Range	5 -24 VDC or AC (50-1000Hz) 500V
Isolation	Ch to Ch OR Ch to Gnd
Input Resistance	470 Ω
Response Time	10ms with filter, 20µs without filter

RELAYS

Number of Relays	8
Type	Ch 0-4, Form C, SPDT Ch 5-8, Form A, SPST
Current Capacity	2A carry current
Resistance	100 mΩ max.
Relay Life	10 million operations min.
Operating Time (Mechanical)	20ms max.

ORDERING GUIDE

Model DIO8-P ..... $ 225.00
Isolated Relay Board

ACCESSORIES

Model UTB-K ..... $ 120.00
Termination board/Metal enclosure

Model UTB ..... $ 80.00
Termination board

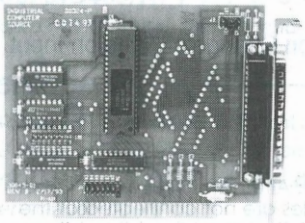
Model 2M37DSM ..... $ 35.00
Screw termination panel

Model C1800 ..... $ 25.00
18" (457 mm) Interconnect cable [Cable is not rated for 500V isolation]

Model 2TK2D-6 ..... $ 3.00
6" section of SNAPTRAK

Model TKAD ..... $ 2.00
Din rail mounting clips for SNAPTRAK (2 required)

Model DIO24-P



Faxline Document #:1144

FEATURES

- Unidirectional or Bi-directional Strobed I/O
- Interrupt Handling
- 24 TTL/DTL Digital I/O Lines

LIFETIME GUARANTEE!

The DIO24-P is ideally suited for process control, data acquisition, contact closure I/O for security systems, energy management, and other industrial applications requiring on/ off digital inputs and outputs.

SPECIFICATIONS

DIGITAL I/O

Logic Controller	8255 P.P.I., Modes 0, 1, 2
Logic	Positive True
Input Low	0.8V max
Input High	2.0V min
Output Low	0.45V max
Sink Current	1.7mA
Output High	2.4V min
Sources Current	200µA

GENERAL

Power Required	170mA @ +5VDC

PHYSICAL

Connector Type	37-pin D-shell male

ORDERING GUIDE

Model DIO24-P ..... $ 130.00

ACCESSORIES

Model UTB-K ..... $ 120.00
Termination board/Metal enclosure

Model UTB ..... $ 80.00
Termination board

Model 2M37DSM ..... $ 35.00
Termination board for TTL only

Model C1800 ..... $ 25.00
18" (457mm) Cable

Model 2TK2D-6 ..... $ 3.00
6" section of SNAPTRAK

Model TKAD ..... $ 2.00
Din rail mounting clips for SNAPTRAK (2 required)

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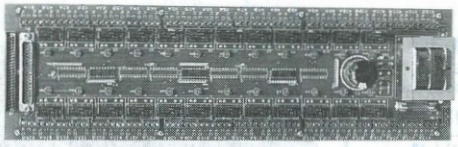
Relay & Isolated Digital Input Cards

Electromechanical Relay Card

Model RBAC-24

NEW!

Faxline Document #:1175



FEATURES

- 24 SPDT Form C Relays (DPDT Optional)
- 3A Carry-Current
- Compatible with PCDIO Series
- LED to Indicate Relay Activated

The RB-24 Series are 24-channel relay output cards that can be controlled by digital inputs from the PCDIO Series of digital I/O cards. On-board drivers allow the card to be driven by any digital output card that uses an 8255 with buffered outputs with either a 37- or 50-pin connector.

SPECIFICATIONS

Relays	RB-24: 24 SPDT, Form C RB-24/DP: 24 DPDT, Form C
Switching Current	2A, AC or DC max
Switched Voltage	125VDC or ACrms max
Switched Power	30VA max

GENERAL

Power Required	RB-24 & /DP: +5VDC @ 3A (all relays ON) RBAC-24 & /DP: 120VAC @ 260mA (all relays ON)
Size	16" x 4.75" x 2" (406 x 121 x 51mm)

ORDERING GUIDE

Model RB-24 . . . . . $ 275.00
SPDT relay card, 5VDC powered, manual

Model RB-24/DP . . . . . $ 315.00
DPDT relay card, 5VDC powered, manual

Model RBAC-24 . . . . . $ 315.00
SPDT relay card, 120VAC powered, manual

Model RBAC-24/DP . . . $ 345.00
DPDT relay card, 120VAC powered, manual

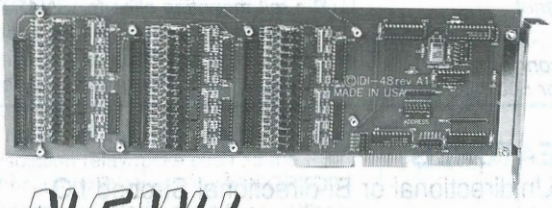
ACCESSORIES

Model CAB50A-6 . . . . . $ 40.00
Cable, RB-24 to PCDIO series card

Model CABMLX. . . . . $ 15.00
Power cable for 5VDC version

48 Isolated Digital Input Lines

Model DIO48I/60



NEW!

Faxline Document #:1176

FEATURES

- 48 Individually Isolated Digital Inputs
- 500Vrms Isolation, Channel-to-Channel & Channel-to-PC
- On-board Shields Prevent Contact with User Voltages
- 28V and 60V Versions Available

(DIO48SI ONLY)

- Generates Interrupt Upon Change of State on Input

The DIO48I cards provide 48 parallel, differential, individual input lines that are optically isolated. Protection circuits are included in case of accidental polarity reversal of the input connections. The DIO40SI adds change-of-state detection capability. When activated, latched interrupt requests can be generated when one or more bits change state.

SPECIFICATIONS

DIGITAL I/O

Number of Lines	48 optically isolated, differential
Voltage Range	Logic 0: Open or 1.5VDC max Logic 1: 28V model; 2.4V min at 0.7mA 28V max at 15mA 60V model; 24V min at 0.7mA 60V max at 1mA
Isolation	500Vrms channel-to-channel and channel-to-PC

(**Note:** Alternate wires in the ribbon cables are not connected at the card, thus providing bit-to-bit isolation higher than that normally provided by ribbon cables).

GENERAL

Power Required	+5VDC @ 300mA

PHYSICAL

Temperature Range	Operating: 0 to 60°C Storage: -20 to +100°C
Size	13.31in (338mm) L

ORDERING GUIDE

Model DIO48I/28 . . . . . $ 350.00
28V version, software, manual

Model DIO48SI/28 . . . . $ 420.00
28V state change version, software, manual

Model DIO48I/60 . . . . . $ 425.00
60V version, software, manual

Model DIO48SI/60 . . . . $ 485.00
60V state change version, software, manual

ACCESSORIES

Model UTB-K . . . . . $ 120.00
Termination panel/ metal enclosure

Model UTB . . . . . $ 80.00
Termination panel, no enclosure

Model 2M50FC . . . . . $ 59.00
Screw termination panel

Model CAB50A-6 . . . . . $ 40.00
Cable, DIO48I to UTB or 2M50FC

Order Now!

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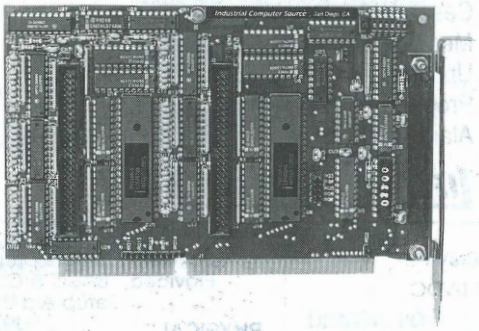
48 Channel Digital I/O & 16 Channel Relay Cards

Model DIO48S/AT-P

Faxline Document #:1125



FEATURES

- 48 Channels of Digital I/O
- Interrupt Generation on Input Change of State
- Change-Of-State Interrupt Software Enabled in Six 8-Input Ports
- All 48 I/O Lines Buffered
- Four and Eight Bit Ports
- Hysteresis and Pull-Ups on I/O Lines
- Compatible With Industry Standard I/O Racks

LIFETIME GUARANTEE!

The DIO48S/AT-P provides 48 lines of digital I/O controlled by two 8255-5 Programmable Peripheral Interface chips of 24 lines each. Each chip provides three 8-bit ports, one of which can be split into 4 in and 4 out functionality. The I/O lines are buffered by 74LS245 integrated circuits.

A major feature of this card is its ability to monitor all inputs and generate a latched interrupt request upon a change of input state. The latched request can subsequently be cleared by software control.

Utility software provided on diskette with the DIO48S/AT-P card is an illustrated setup program. Interactive displays show locations and proper settings of DIP switches and jumpers to setup board address, interrupt levels, and interrupt enable.

SPECIFICATIONS

DIGITAL I/O

Logic Controller	8255-5 P.P.I., Mode 0 only
Input Low	-0.5 to +0.8VDC
Input High	+2.0V to +5.0VDC
Output Low	+0.5VDC max
Sink Current	24mA
Output High	+2.5VDC min.
Source Current	15mA
I/O Space	16 Bytes
IRQ Selections	3 thru 7, 10 thru 12, 14, and 15
Power Required	+5VDC @ 300mA typical
Digital Inputs	Tri-State Buffered, 74LS245 Input Load (Hi): 20 µA Input Load (Lo):-200 µA
Power Output	+5VDC from computer bus (ext. 1A fast-blow fuse recommeded)

PHYSICAL

Temperature Range	Operating: 0 to +60°C Storage: -5 to +12°C
Relative Humidity	0 to 90% RHNC
Size	7.15" (182mm) long
Connector Type	50-pin IDC Headers/24 I/O lines

ORDERING GUIDE

Model DIO48S/AT-P . . . $ 350.00
Board, 48 Channel, manual and Utility disk

ACCESSORIES

Model UTB-K . . . . . $ 120.00
Termination panel/Metal enclosure

Model UTB . . . . . $ 80.00
Termination board

Model 2M50FC . . . . . $ 59.00
Screw terminal board for field wiring

Model CAB50-6 . . . . . $ 40.00
6' (1.83m) Cable to connect DIO48S-P to PB24 Isolation Relay Rack

Model CAB50A-6 . . . . . $ 40.00
DIO48S-P to UTB-K Screw Termination Metal enclosure or to 2M50FC

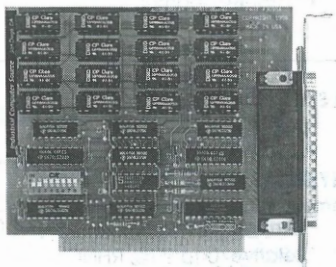
Model 50IDC . . . . . $ 10.00
IDC Header connector for DIO48S-P

Model 2TK2D-6 . . . . . $ 3.00
6" section of SNAPTRAK

Model TKAD . . . . . $ 2.00
Din rail mounting clips for SNAPTRAK (2 required)

Faxline Document #:1003

Model 16REL



FEATURES

- 16 Reed Relay Output Channels
- Non-Destructive Read-Back
- High Reliability 10VA DIP Reed Relays
- Power and Ground Provided on Connector

SPECIFICATIONS

Output Relay Specs	200M Operations 10VA, Resistive Load
Connector	DB-37 Male
Operating Temperature	0 to 50°C
Storage Temperature	-20 to 70°C
Relative Humidity	0 to 90% RHNC
Power Requirements	+5V @ 210mA +12V @ 50mA

The Model 16REL is the output half of the Model DIO32B. The reed relays used for output have the same 10VA rating. The DB37 male connector mounted on the board provides for simple user interface.

ORDERING GUIDE

Model 16REL . . . . . $ 189.00
Card, manual

5, 10, and 20 Channel Counter/Timer Cards

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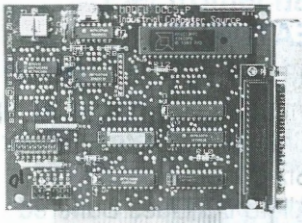
Model DCC5-P

Faxline Document #:1179



FEATURES

- 5 Independent 16-Bit Counters
- Cascadable Counters
- Measures Frequency to 7Mhz
- Up/Down and Binary/BCD Counting
- Programmed Frequency Output
- Alarm Comparators on Two Counters

LIFETIME GUARANTEE!

SPECIFICATIONS

COUNTER TIMER

Counter Type	AM9513
Number of Counters	One offering 5 independent channels
Counter Clock	1.00 Mhz (±0.01%, 0 to 70° C)

DIGITAL I/O

Number of Lines	8 input and 8 output, LS245 Buffered
Logic	Latched LSTTL
Input Low	-0.5 to 0.8VDC
Input High	2.0 to 5.0VDC
Sink Current	24 mA
Source Current	18 mA

GENERAL

I/O Space	4 bytes
IRQ Selections	2 through 7
Power Required	+5VDC @ 400mA typical
Software Provided	Sample programs in BASIC & C Setup Aid Utility

PHYSICAL

Temperature Range	Operating: 0 to +50° C Storage: -25 to +85° C
Relative Humidity	0 to 90%, RHNC
Size	1/2 Slot
Connector Type	37-pin D-shell, male

ORDERING GUIDE

Model DCC5-P . . . . . $ 295.00
Counter/Timer Board, manual, software

ACCESSORIES

Model UTB-K . . . . . $ 120.00
Termination card/Metal Enclosure

Model UTB . . . . . $ 80.00
Termination board

Model 2M37DSM. . . . . $ 35.00
Screw termination panel

Model C1800. . . . . $ 25.00
18" (487 mm) cable

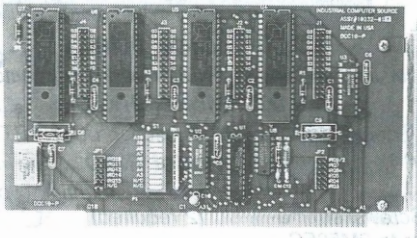
Model 2TK2D-6 . . . . . $ 3.00
6" section of SNAPTRAK

Model TKAD. . . . . $ 2.00
Din rail mounting clips for SNAPTRAK (2 required)

10 or 20 Channel Counter/Timer Cards

Model DCC20-P

Faxline Document #:1179



FEATURES

- 10 or 20 Independent 16-Bit Counters
- Binary/BCD – Up/Down Counting
- Programmable Count Source/Gate Selection
- Programmable Input/Output Polarities
- Interrupt Handling
- 1 MHz TTL Oscillator
- Counters Internally Cascadable

LIFETIME GUARANTEE!

SPECIFICATIONS

COUNTER TIMER

Counter Type	AM9513
Number of Counters	Four offering 20 channels total Independent or cascade
Counter Clock	1Mhz (±0.01%, 0 to 70°C)
Counter Outputs	TTL/DTL compatible

GENERAL

I/O Space	8 bytes
IRQ Selections	2-7, 9-12, 14 & 15
Software Provided	Sample program in Basic & C

PHYSICAL

Temperature Range	Operating: 0 to +50° C Storage: -40 to +100° C
Relative Humidity	0 to 90%, RHNC
Size	3/4 slot
Connectors	Four 26-pin IDC header, One per AMD9513

ORDERING GUIDE

Model DCC20-P . . . . . $ 450.00
Counter/Timer card, manual, software

Model DCC10-P . . . . . $ 375.00
Counter/Timer card, manual, software

ACCESSORIES

Model 2M26FC. . . . . $ 55.00
Termination card for DCC20-P, one required for each counter chip (maximum of 4)

Model C2600. . . . . $ 30.00
36" (914 mm) cable for interface between DCC10-P or DCC20-P & 2M26FC, one required for each counter chip/termination card (maximum of 4)

Order Now!

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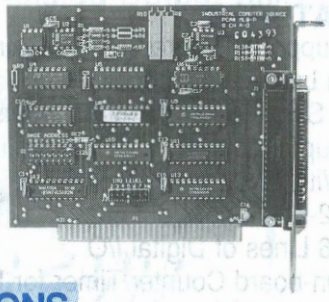
Low Cost Analog Input Boards

Model ML8-P

Faxline Document #:1154



FEATURES

- 8 A/D Channels With 8-Bit Resolution
- Low Cost
- 7 Digital I/O Bits (4 Output, 3 Input)
- ±5 Volt Inputs (for 39mV Resolution)
- Interrupt Handling Capability

LIFETIME GUARANTEE!

SPECIFICATIONS

ANALOG INPUTS

Channels	8, single ended
Resolution	8-bits (39mV)
Input Range	±5V
Conversion Time	20µs typ., 30µs Max
Accuracy	0.2% of reading ±1 bit

REFERENCE

Reference Voltage	+5.0V ±0.2V

DIGITAL I/O

Number of Lines	Inputs: 3 Outputs: 4

GENERAL

Power Required	+5V @ 105mA typ. /175mA Max. +12V @ 26mA typ. /30mA Max. -12V @ 16mA typ. /20mA Max.

PHYSICAL

Temperature Range	Operating: 0 to 50°C Storage: -20 to +70°C
Connector	37-pin D-shell, male

ORDERING GUIDE

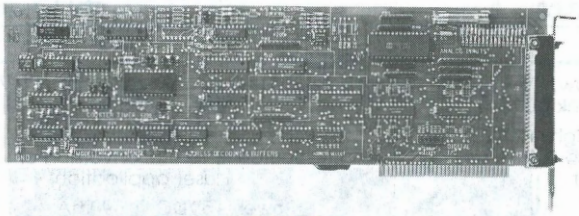
Model ML8-P . . . . . $ 199.00
Board, manual, software

ACCESSORIES

Model UTB-K . . . . . $ 120.00
Screw terminal board/Metal enclosure

Model C1800 . . . . . $ 25.00
18" (457mm) cable to UTB-K

Model ML16-P



FEATURES

- 16 Single-Ended or 8 Differential A/D
- Two Analog Outputs
- Eight Digital Inputs
- Eight Digital Outputs
- Three Programmable Counter/Timers
- 8-Bit A/D & D/A Resolution
- LABLOG Included

SPECIFICATIONS

ANALOG INPUTS

Channels	16 single-ended or 8 differential; selected by jumper
Resolution	8 bits binary
Input Ranges	±128mV or 0-255mV with 1mV resolution ±5V or 0-10V with 39mV resolution Software selectable for each channel
Throughput	16,600 conversions per second maximum scanning
Accuracy	±0.04% of reading ±1 LSB

ANALOG OUTPUTS

Channels	2
Resolution	8 bits
Output Range	±10VDC

DIGITAL I/O

Number of Lines	Input: 8 Output:8

COUNTER/TIMER

Type	8253-5
No. of Counters	3
Counter Clock	Internal: CPU Clock or Color Osc. divided by 1/2, 1/4, 1/8, or 1/16 External Jumper Selectable
Minimum Pulse	50ns
Timer Range	10Mhz Max

GENERAL

Power Requirements	+5VDC @ 0.5A +12VDC @ 20mA -12VDC @ 20mA
Software Provided	Lablog Sample Code in C, Pascal, and Quick BASIC

PHYSICAL

Temperature Range	Operating: 0 to +60°C Storage: -40 to +100°C
Connector Type	50-pin header at rear

LIFETIME GUARANTEE!

ORDERING GUIDE

Model ML16-P . . . . . $ 249.00
Card, & Lablog Software, manual

ACCESSORIES

Model ML-16TK . . . . . $ 119.00
Termination Panel

Model LABLOG . . . . . $ 100.00
Demo Disk Available

Model UTB-B . . . . . $ 50.00
Metal Enclosure for ML-16K

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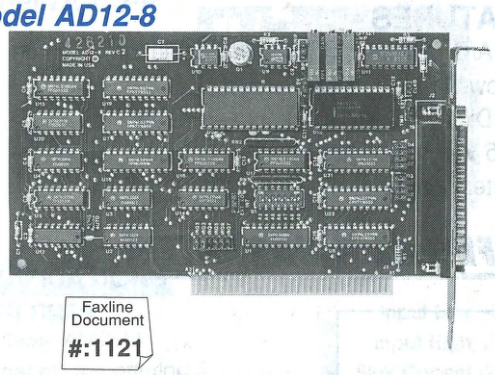
Eight Channel Multi-Function Card

Model AD12-8



Faxline Document #:1121

FEATURES

- Supports Programmable Gain Feature of AT16-P in Labtech Notebook
- 8 Single-Ended Analog Inputs
- Supports up to 128 Differential Inputs When Used With AT16-P
- 12-Bit Resolution
- 16 Lines of Digital I/O
- On-board Counter/Timer for Event Counting

The Model AD12-8 is an 8-channel, 12-bit Analog-to-Digital converter and Counter/Timer card. All connections are made through a standard DB37 male connector. Address setup is via switches on the card. The card is capable of up to 40,000 conversions per second. Inputs to the A/D are single-ended with common ground and can withstand ±30 VDC overload and transients of several hundred volts. All inputs are fail-safe (open) when power is off.

The A/D is a successive approximation type with analog multiplexer and sample and hold amplifier. Full scale inputs of 0 to 10V, ±10V and ±5V are jumper selectable and provide resolution of 4.88mV and 2.44mV. A/D conversion time is typically 25 microseconds.

The AD12-8 contains two control registers for controlling up to eight 16-input multiplexers, Model AT16-P. This provides capability for up to 128 differential inputs, and different gains for each channel of those multiplexers. This allows you to mix widely different full-scale inputs on a channel-by-channel basis.

An 8254 Counter/Timer chip that contains three 16-bit counters is included. By means of a jumper, you can set up the card to automatically start upon completion of a counter cycle. Data from the previous conversion is stored in dedicated registers to be read by the computer while the conversion cycle is in progress. Counters 1 and 2 are concatenated to 32 bits for this purpose and the clock input is derived from a 1/32 multiple of the computer's color oscillator.

The AD12-8 can initiate interrupts at IRQ levels 2 through 7. These interrupts can be initiated either by the A/D converter's EOC signal at the end of each conversion or from an external source via pin 24 of the I/O connector.

SPECIFICATIONS

ANALOG INPUTS

Channels	8 SE
Resolution	12-bit binary
Input Ranges	±5VDC, ±10VDC or 0V to +10VDC
Throughput	40,000 conversions/second max
Overvoltage	±30VDC
Input Impedance	10 MΩ
Accuracy	±0.02% of reading, ±1 LSB
Linearity	±1 LSB
Temp Co	±10mV per °C zero stability ±25mV per °C gain stability

REFERENCE VOLTAGE

Output	+10.0VDC ±0.01VDC at up to 220mA

DIGITAL I/O

Input Low	Logic low, 0V to +0.4V @ 8mA sink current
Input High	Logic high, +2.4V to +5.0V @ 0.4mA source current

(DIO 0 TO DIO 7)

Output Low	Logic low, 0V to +0.4V
Sink Current	24mA sink current
Output High	Logic high, +2.8V to +5.0V
Source Current	2.6mA source current

(GN0 TO GN2 & OP0 TO OP4)

Output Low	Logic low, 0V to +0.4V
Sink Current	8mA sink current
Output High	Logic high, +2.4V to +5.0V
Source Current	0.4mA source current

GENERAL

IRQ Selections	Jumper selectable, 2-7 Enable/Disable Via software
IRQ Source	End of Conversion or user application
Power Required	+5VDC @ 390mA +12VDC @ 10mA -12VDC @ 10mA

PHYSICAL

Temperature Range	Operating: 0 to 60°C Storage: -40 to +100°C
Relative Humidity	0 to 90% RHNC

ORDERING GUIDE

Model AD12-8 . . . . . $ 375.00
Card, manual, software

ACCESSORIES

Model SSH-08 . . . . . $ 550.00
Sample & Hold Card

Model AT16-P . . . . . $ 395.00
Software programmable expansion multiplexer/amplifier system

Model UTB-K . . . . . $ 120.00
Termination Card/Metal Enclosure

Model UTB . . . . . $ 80.00
Termination board

Model 2M37DSM. . . . . $ 35.00
Screw termination panel

Model C1800. . . . . $ 25.00
18" (457mm) cable

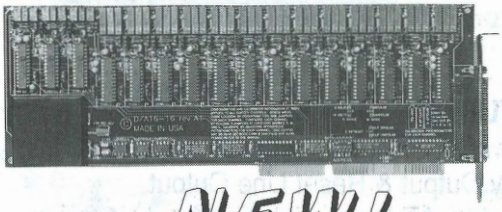
Model 2TK2D-6 . . . . . $ 3.00
6" section of SNAPTRAK

Model TKAD. . . . . $ 2.00
Din rail mounting clips for SNAPTRAK (2 required)

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

16 Channel Analog Output Card

Model AOB16/16



NEW!

Faxline Document #:1122

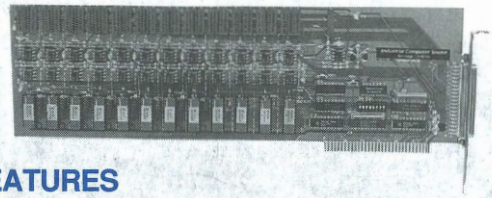
FEATURES
- 16-Bit Resolution Digital to Analog Converters
- 8 or 16 Channel Versions
- 4 Output Voltage Ranges
- Zero Volts out on Power-up or Reset
- Channel-by-Channel or Simultaneous Update Modes
- Unique "Software Clear" Function Permits DAC Reset Without Resetting Pre-Load Registers

Model AOB16/16 ..... $ 1599.00
Model AOB8/16 ..... $ 949.00

ACCESSORIES
Model UTB-K ..... $ 120.00
Termination Card/Metal Enclosure
Model UTB ..... $ 80.00
Termination board

12 Channel Analog Output Card

Model AOB12



FEATURES
- 30 to 50kHz Throughput
- Unipolar & Bipolar Modes
- 12 Independent 12-Bit DACS
- Bipolar Mode Supports
- Parallel Triggering Available Remote Sensing on 8 Channels

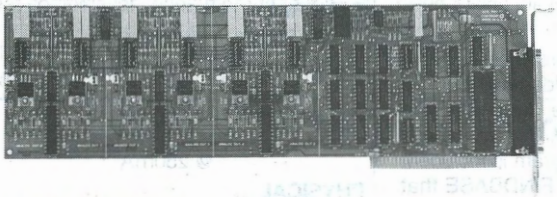
The AOB12 is ideal for the user who needs a large amount of D/A capability. This card contains nothing but D/A.

Model AOB12 ..... $ 1150.00
Card, manual, software

ACCESSORIES
Model UTB-K.. ..... $ 120.00
Termination Card/Metal Enclosure
Model UTB ..... $ 80.00
Termination board
Model C1900..... $ 25.00
18" (457mm) Cable

6 Channel Analog Output Card

Model AOB6-P



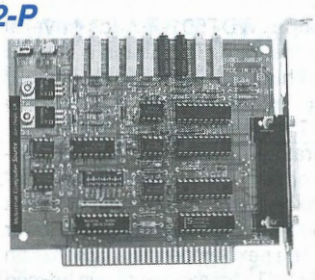
FEATURES
- 6 Analog Outputs
- Calibration Software Included
- 12-Bit Resolution
- Current Loop Capability
- 24 Digital I/O
- Individual Range Selection Per Channel
- Ideal for Industrial Control Applications

Model AOB6-P ..... $ 535.00
Card, manual, software

ACCESSORIES
Model UTB-K ..... $ 120.00
Termination Card/Metal Enclosure
Model UTB ..... $ 80.00
Termination board
Model C1800..... $ 25.00
18" (457mm) cable

2 Channel Analog Output Card

Model AOB2-P



Faxline Document #:1155

FEATURES
- 2 Analog Output Channels
- 12-Bit Resolution

LIFETIME GUARANTEE!

The AOB2-P consists of two separate double buffered 12-bit multiplying D/A channels plus interface circuitry.

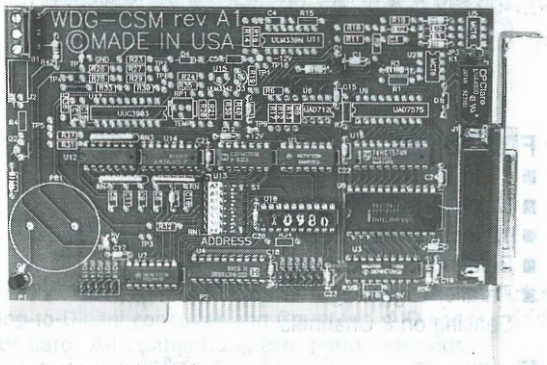
Model AOB2-P ..... $ 295.00

ACCESSORIES
Model UTB-K ..... $ 120.00
Termination Card/Metal Enclosure
Model UTB ..... $ 80.00
Termination board
Model K1800A..... $ 30.00
18" (457mm) Cable

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

Multifunction Watchdog Timer Card

Model WDT500-P



FEATURES

- Software Selectable Timeout: 10µs to 4800s
- Relay Output & Reset Line Output
- Half-size, AT Compatible
- Optional Temperature Monitor/Alarm, Fan Speed Detect, & Buzzer Plus More! (WDT501-P)

Faxline Document #:1190

The newest member of the Watchdog Timer Family is the Model WDT500-P Series. The basic model, WDT500-P provides a software selectable time-out from 10 microseconds to 4800 seconds. In the event that your application program does not reset the card during that period, a relay output and/or a reset line output is available to reset the computer.

The Model WDT501-P adds several options to the card. The first is a voltage monitor. This monitor checks all four computer voltages to see if they have exceeded 7% of nominal. The next two are for temperature monitoring. The first temperature option is an alarm if the temperature exceeds 50° C. An adjustment is available to set the temperature either lower or higher. The next temperature option is an actual monitor. The temperature can be read to within -14° C. Another option is a buzzer that will sound if the watchdog times out. A fan speed detector is provided that will trigger if the fan tachometer output drops below 50Hz. Still another option provided is two isolated input lines that are tied to a change of state detector. If either of these lines changes, the state detector will generate an IRQ if desired. The last option is two isolated output lines that are connected to the reset output. They are of opposite polarity.

SOFTWARE

A software utility disk is provided to aid in installation as well as provide programming examples. The example programs are presented in QuickBASIC, C, and Pascal. Source code for each program is included. A utility is provided titled FINDBASE that aids in locating a free block of I/O space for the card. There is also a Windows DLL software provided for those users who wish to program in VisualBASIC.

SPECIFICATIONS

WATCHDOG TIMER

Time-Out	Selectable from 10µs to 4800s
Clock	894.88625kHz, derived from color clock (14.31818Mhz/16)
Relay Contact Rating	Max switching current 2A DC or AC, 30VA max

GENERAL

I/O Space	8 bytes
IRQ Selections	2-7, 10-12, 14, or 15
Power Required	WDT500-P: +5VDC @ 125mA WDT501-P: +5VDC @ 250mA

PHYSICAL

Temperature Range	Operating: 0 to 60°C Storage: -50 to +120°C
Relative Humidity	10 to 90% RHNC
Size	6.5" x 3.9" (165 x 99mm)
Connector Type	DB25 female

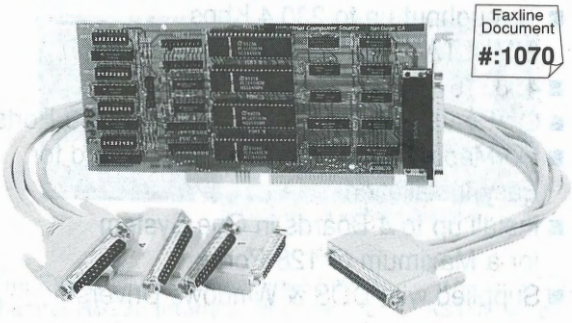
ORDERING GUIDE

Model WDT500-P ..... ***$ 125.00***
Basic card, software, manual

Model WDT501-P ..... ***$ 195.00***
Card w/ options, software, manual

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

Model WINCOMM4



Faxline Document #:1070

FEATURES

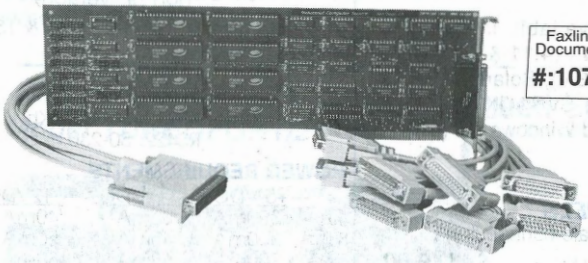
- 4 RS232 Ports with All Modem Control Signals
- Individually Selectable Port Addresses
- Individually Selectable, Extended AT Interrupts
- Each Port is Individually Addressable as COM1: Through COM4: or Any Other I/O Address up to 3FF Hex
- Multiple Cards can Share the Same IRQ Signal
- Comes Standard with 16550 UARTs
- Windows 3.1 Compatible

The WINCOMM4 provides 4 additional serial ports for terminals, modems, printers, etc. The WINCOMM4 will function in either a DOS or Windows environment. The card can be configured as COM1: through COM4: or any other I/O address (up to 3FFH), providing a low cost means of expanding the number of serial ports on your PC. The WINCOMM4 utilizes the 16550 UART.

ORDERING GUIDE

Model WINCOMM4 . . . $ 299.00
Board, cable, manual, software

Model WINCOMM8



Faxline Document #:1073

FEATURES

- 8 RS232 Ports with Full Modem Control
- Extended AT Interrupts, Selectable for Each Port
- Extended Address Range for UNIX / SCO XENIX
- Interrupt Status Register
- Interrupt Sharing
- 16550 UARTs Included

The Model WINCOMM8 combined with the Model HICOM/9 Windows driver makes a great combination when more than 4 ports are required under Windows. The Model WINCOMM8 occupies 64 consecutive I/O locations but HICOM/9 makes Windows port addressing a snap. For special addressing requirements, a custom PAL can be installed. Using the PAL option will allow you to obtain COM1: thru COM4: address, XENIX comm address, or any other standard or nonstandard address configuration.

ORDERING GUIDE

Model WINCOMM8 . . . $ 499.00
8-Channel Board, software, manual

Windows Device Driver for Non-Intelligent Multi-Port Serial Cards

The Model HICOM/9 Windows driver provides the PC/XT/AT, with a software driver, under Windows 3.1, that directly supports up to nine serial ports. Programmable controllers, data entry terminals, timeclocks and any communications application running under Windows 3.1 requiring multiple ports can benefit from the use of HICOM/9. Just as with DOS applications, distances of up to 5000 feet, or 1515 meters (RS422) are easily accommodated when utilizing the HICOM/9 Windows driver and the appropriate communications adapter.

WINDOWS COMMUNICATIONS

Windows 3.1 provides a versatile and easily configurable interface to support up to 4 COM: ports with the standard driver. Under Windows 3.1, up to 9 serial ports can be easily configured if using the new HICOM/9 Windows driver. The Windows HICOM/9 ports applet allows the user to configure each port. The user is allowed to select or define the COM port, Baud Rate, Data Bits, Stop Bits, Flow Control, Base I/O Address, IRQ, and 16550 FIFO UART usage. By providing access to the "AT" IRQ lines 10, 11, 12 and 15, higher data throughput and reliable communications can be achieved by assigning each serial port its own IRQ line.

FEATURES

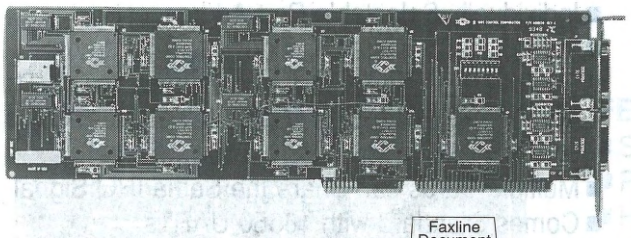
- Supports Up To 9 Serial Ports Under Windows 3.1
- Maintains Standard COM1:Access
- Supports Both Standard & 386 Enhanced Modes Under Windows 3.1
- Programming Interface is Identical to That For The Standard Microsoft Driver
- Simple Installation Program to Allow You to Get Up & Running Fast
- Driver Replaces Limited Windows 3.1 Driver
- Technical Support Provided at No Cost
- Supports 82510 UART

ORDERING GUIDE

Model HICOM/9 . . . . . $ 99.00

Multiport Adapters

Model ROCKETPORT32



Faxline Document #:1100

FEATURES

- Throughput up to 230.4 Kbps SIMULTANEOUSLY (RS422 Mode)
- 4, 8, 16, & 32 Port Models
- On-Board 36 Mhz Processor for Each 8 Ports
- I/O Mapped Like a Non-Intelligent Card for Easy Installation
- Install up to 4 Boards in One System for a Maximum of 128 Ports
- Supplied with DOS & Windows Drivers

The ROCKETPORT multiport serial controller series fits a 16-bit ISA slot of a PC compatible computer. Four base versions are available in 4, 8, 16, or 32 ports. Further, two connector versions are offered. There is a 4 and 8 port version with RJ45 (4 port) or RJ11 (8 port). There are also 4, 8, 16, and 32 port versions with external junction panels with DB25 female connectors. One version of this panel is just RS232 while another is switch selectable between RS232 and RS422.

DRIVER SUPPORT

The RocketPort card come supplied with both DOS and Windows drivers, as well as SCO UNIX drivers. Using DOS, support for up to 128 ports is provided. Using Windows, you have support for up to 96 ports. That's three RocketPort cards running under Windows!

Other drivers available include the following: OS/2, QNX (4.11 & 4.2), SCO XENIX (SRV 3.2v2.3.4), Solaris, SVR3.2 UNIX (3.2v3 & 3.2v4), SVR4 UNIX (SRV4.2 & Unixware 1.0), and Windows NT (3.1).

SPECIFICATIONS

Ports	4, 8, 16, or 32
Number of Cards per System	4 max
Interface	RS232 (Optional RS422, non "J" version)
Interrupt	None, 3-5, 9-12, & 15
Data Bits	7/8
Stop Bits	1/2
Baud Rate	RS232: 50-115.2Kb RS422: 50-230.4Kb

POWER REQUIREMENTS

	+5 VDC	+12VDC	-12VDC
4J	300mA	35mA	40mA
8J	300mA	45mA	50mA
8	700mA	65mA	80mA
16	950mA	130mA	150mA
32	1.9A	240mA	270mA

Temperature	Operating: 0 to 70°C Storage: -65 to 150°C
Relative Humidity	8 to 80% RHNC

MTBF	
4J	41 years
8J	36 years
8	51 years
16	39 years
32	25 years

ORDERING GUIDE

Model ROCKETPORT4J . $ 299.00
Board, manual, software

Model ROCKETPORT8J . $ 399.00
Board, manual, software

Model ROCKETPORT4 . . $ 359.00
Board, manual, software

Model ROCKETPORT8 . . $ 379.00
Board, manual, software

Model ROCKETPORT16 . $ 629.00
Board, manual, software

Model ROCKETPORT32 . $ 1099.00
Board, manual, software (Requires two 16 port interface panels)

INTERFACE PANELS

(All have DB-25 female connectors)

Model RPI4-232 . . . . . $ 149.00
Panel, cable

Model RPI4-232/422 . . . $ 185.00
Panel, cable

Model RPI8-232 . . . . . $ 299.00
Panel, cable

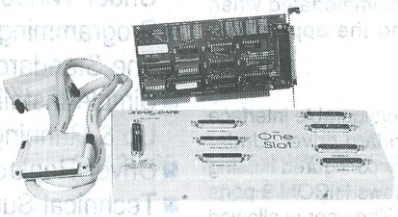
Model RPI8-232/422 . . . $ 329.00
Panel, cable

Model RPI16-232 . . . . . $ 399.00
Panel, cable

Model RPI16-232/422 . . $ 459.00
Panel, cable

Serial Parallel Multiport Board

Model ONE-SLOT



Now a single PC expansion slot can support up to 7 peripheral devices, including laser printers, dot matrix printers, mice,bar code readers, plotters and modems. The Model ONE-SLOT Combination Multiport Board supplies 4 serial (COM 1 - COM 4) and 3 parallel ports (LPT 1 - LPT 3) in one low-cost, easy to install unit. Delivering full duplex communications with complete handshake control on all serial ports and bidirectional Centronics on all parallel ports, the ONE-SLOT supports a multitude of PC expansion applications for single-user, multi-user and networking installations.

FEATURES

- Supports Windows, Multimedia, OS/2, Novell and DOS Environments
- Fully Shielded Remote Panel & Cables
- 4 EIA-232E Serial Ports with Full Handshake Control
- Baud Rates of 50 to 115K Programmable
- 3 Centronics Parallel Ports

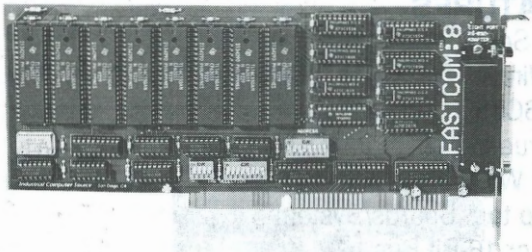
ORDERING GUIDE

Model ONE-SLOT . . . . . $ 249.00
Board, manual, remote panel, cable

EXPRESS SOURCE-BOOK FAXLINE
1-800-677-7329
Receive a detailed FAX within Minutes!
FAX

Multi-Channel, High-Speed Adapters

Model FASTCOM8



Faxline Document #:1036

FEATURES

- 8 RS232 Ports
- Uses 16550 UARTs
- AT Interrupts
- SMART14 Software Included
- 16 Byte FIFO for Improved Throughput

The FASTCOM8 is an advanced multi-channel RS232 interface designed for commercial, industrial, and OEM applications. The FASTCOM8 uses the high performance 16550 UARTs and makes the board compatible with DOS, Windows and UNIX.

The eight channel FASTCOM8 inherits all of the hardware/software features of our popular four channel FASTCOM4 adapter. Software and hardware systems designed using the FASTCOM4 will benefit from the advanced features of the FASTCOM8.

The FASTCOM8 can operate with a FASTCOM4 on the same bus. Its switch selectable address and IRQ sharing allow multiple FASTCOM boards to be installed in a single system.

SPECIFICATIONS

No. of Ports	8 RS232
UART	TIL16C550
Baud Rate	50 - 256k
Interrupt Levels	2-7, 10,-12, 15
Buffering	Transmit - 16 bytes Receive - 16 bytes
Signals Supported	TXD, RXD, DTR, DSR, DCD, RTS, CTS, & RI
Bus	16 bit
Power Requirements	+5V @ 600mA +12V @ 6mA -12V @ 6mA

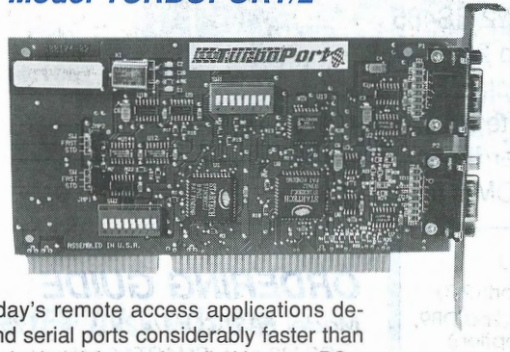
ORDERING GUIDE

Model FASTCOM8 . . . . . $ 599.00

RS232, 8-port card, software, manual & cable

High-Speed Serial I/O Ports

Model TURBOPORT/2



Faxline Document #:1167

FEATURES

- Supports Data Rates up to 460.8kbps
- Ideal for 28.8kbps Modems
- One or Two Programmable Ports for ISA Systems
- Multiple-Strike Surge Protection on Every Signal

Today's remote access applications demand serial ports considerably faster than standard serial ports installed in most PCs. Four times faster than V.34 modems, the TURBOPORT family is designed to support the latest and fastest modern standards.

TURBOPORT controllers easily accommodate data rates up to 460.8kbps. Such speeds significantly reduce transmission times and telephone costs. Designed to deliver fast, reliable connections for remote PC users working in Windows, NetWare, OS/2 or DOS environments, these communications accelerators also may be used on the network side for modem connections supporting small numbers of remote users.

Each port is serviced by a 16C650 UART with twice the FIFO memory capability of standard 16550 UARTS. These 32-byte transmit and receive FIFOs enable the TURBOPORT controllers to maximize modem connections and deliver accurate data transmissions at high speeds. The cards are software-configurable and offer automatic software/hardware flow control.

SPECIFICATIONS

PORTS

Number of Ports	1 - TURBOPORT/1 2 - TURBOPORT/2
Interface	EIA-232
Baud Rates	Up to 460.8kbps
Bus Interface	8-bit with extended interrupt support
UART	16C650, one per port
Data Buffers	32-byte transmit and receive FIFO per port

GENERAL

I/O Address	COM1: through COM4:
IRQ Options	Shared or individual
Interrupts	2-5, 10-12, 15
Power Required	+5VDC @ 160mA +12VDC @ 40mA -12VDC @ 38mA

PHYSICAL

Temperature Range	Operating: 10 to 55°C Storage: -10 to +70°C
Relative Humidity	10 to 90% RHNC
Size	3.375" x 6.37" (86 x 162mm)
Connector	9-pin D-sub EIA-574 serial connector

ORDERING GUIDE

Model TURBOPORT/1 . . $ 89.00

Single port card, software, manual

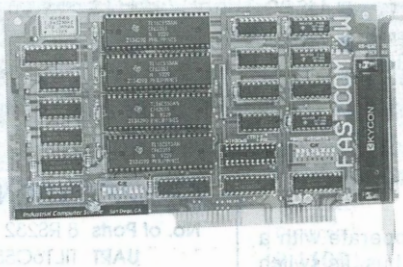
Model TURBOPORT/2 . . $ 129.00

Dual port card, software, manual

4-Port Windows Compatible

Model FASTCOM4W

Faxline Document #:1038



FEATURES

- 4 Serial Ports
- Windows 3.1 Compatible PAL Included
- 16C550 Uarts
- True COM1 thru COM4 Compatibility in Windows Mode
- Up to 5 Boards/System
- 8 or 16-Bit Bus
- Driver/Buffer Software Included

SPECIFICATIONS

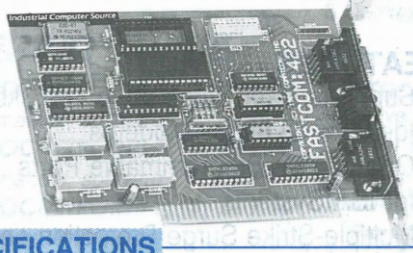
Ports	4, RS232
I/O Address Requirements	32 Bytes-selectable
UARTS	TIL16C550
Interrupt	Selectable 1 of 6 (2-7)
Baud Rates	50-256k (above 56k requires crystal change, customer supplied)
Connectors	DB37, female on card 4 each, DB25, male on cable end
Software	SMART14 Communication Utility
Power Consumption (typical)	5V @ 400mA ±2V @ 50mA each

ORDERING GUIDE

Model FASTCOM4W . . . $ 395.00

RS232, 4-port card, SMART14, Windows PAL, cable and manual

Model FASTCOM/422



FEATURES

- 1 or 2 Serial Com Ports
- RS422/RS485
- Up to 288K Baud
- Selectable I/O Address
- 4 Byte Receive/Transmit Buffers
- Driver/Buffer Software Included
- HICOM/9 Compatible

SPECIFICATIONS

Ports	1 standard (2- /SER option)
I/O Address Requirement	8 I/O Bytes
I/O Base Address	Selectable per port
UART	82510 (2nd 82510-/SER option)
Baud Rates	50-288K baud
Interrupt	1 of 6, per port (2-7)
Connectors	1 DB9, male (2nd DB9, male-/SER option)
Software	SMART14 Communication Utility

ORDERING GUIDE

Model FASTCOM/422. . $ 195.00

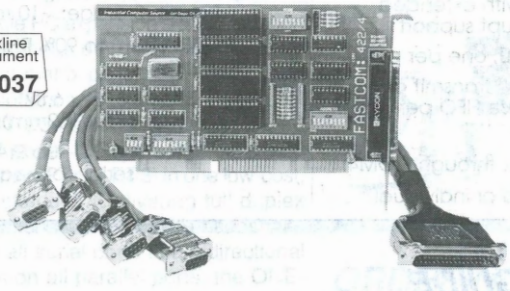
RS422 port, SMART14 software, manual

Model FASTCOM/SER. . $ 49.00

Second RS422 UART and driver chips for FASTCOM/422

Model FASTCOM422/4

Faxline Document #:1037



FEATURES

- 4 Independent RS422/485 Channels
- Up to 32 Stations (RS485 mode)
- High Performance 82510 UARTs
- Speeds of up to 288k Baud
- SMART14 Included
- Extended AT Interrupts
- Interrupt Sharing
- HICOM/9 Compatible

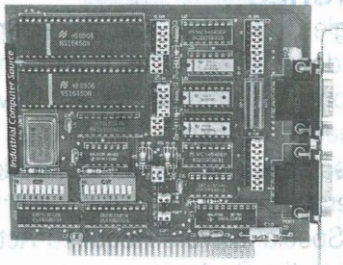
ORDERING GUIDE

Model FASTCOM422/4 . . . . . $ 450.00

Board, manual, SMART14 software, cable

2-Port PC Adapters

Model SPRT2A/AT



Faxline Document #:1067

FEATURES

- Dual RS422/485 or RS232. Ports Can Be Mixed
- Can Be Used in Short Slot
- Addressable COM1-COM4
- DB9, Male Connectors
- 16550 UARTs

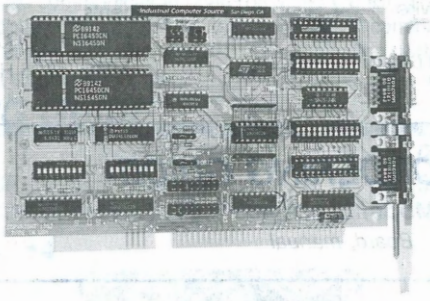
SPECIFICATIONS

Ports	2
I/O Address Requirements	8 consecutive locations/port
I/O Base Address	Selectable per port
Interrupts	1 of 4 selectable per port

ORDERING GUIDE

Model SPRT2A/AT ..... ***$ 229.00***
2-port card, software & manual

Model SPRT2B/AT



Faxline Document #:1067

FEATURES

- Dual RS232 or RS422/485 Ports Can Be Mixed
- Extended AT Interrupts
- Addressable COM1-COM4
- 16550 UARTs

SPECIFICATIONS

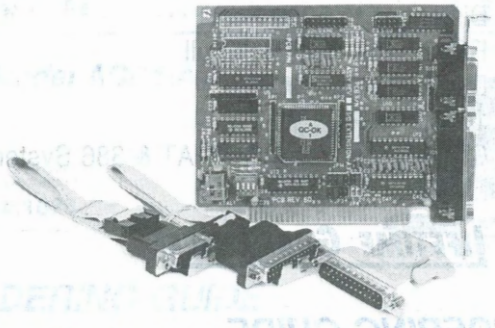
Ports	2
I/O Address Requirements	8 consecutive locations/port
I/O Base Address	Selectable per port
Interrupts	1 of 9 selectable per port

ORDERING GUIDE

Model SPRT2B/AT ..... ***$ 239.00***
2-port card, software & manual

Serial Communication

Model SPC20



FEATURES

- 2 (RS232) Compatible Serial Ports
- PC Compatible
- COM1 thru COM4 Supported
- Printer Port
- LPT1, LPT2 or LPT3

ORDERING GUIDE

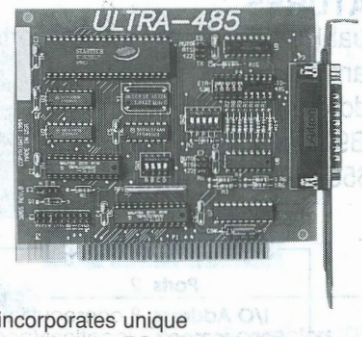
Model SPC20 ..... ***$ 69.00***

RS422/485 Adapters

RS485/422 Adapter for Windows, OS/2, and DOS

Model ULTRA-485

Faxline Document #:1152



FEATURES

- Single Channel RS485/422 Adapter for Windows, Windows NT, OS/2, & DOS Communications
- Automatic Control of RS485 Driver Enable Signal
- Speeds to 115kbps
- Selectable Termination, Echo Mode, 2/4 Wire Operation
- No Special Drivers Required-Acts Like an RS232 Port to the System

The Model Ultra-485 incorporates unique hardware circuitry that enables the RS485 interface to appear to be an RS232 interface, requiring no additional software drivers. Previous RS485 interfaces required the software to "turn on" RTS to transmit and then "turn off" RTS at the end of the character. This required overhead and special interrupt processing. New operating systems such as Windows, Windows-NT, OS/2 and other multi-user operating systems typically will not allow the user access to the low level registers of the UART chip without writing a specialized driver or require significant overhead to accomplish this simple task. Low level RS485 driver maintenance is handled by the hardware on the ULTRA-485 rather than through software, therefore, initial development for RS232 communications can be effortlessly modified to RS485.

SPECIFICATIONS

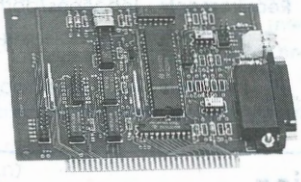
Communications Chip	16550 UART
Number of Ports	Single RS485/422
Max. Data Rate	115kbps
Max. Data Distance	Up to 5000ft.
RS-485 Operation	2 or 4 Wire
Pinout Configuration	EIA 530 DTE pinout on DB25P
Handshake	RTS, CTS, DCD, DSR, & DTR
Operating Temp.	0 to 50° C
Storage Temp.	20 to 70° C
Relative Humidity	0 to 90% RHNC
Power Requirements	+5V @ 160mA
MTBF	>150,000 Hrs
MTTR	<0.25 Hrs

ORDERING GUIDE

Model ULTRA-485 ..... **$ 179.00**
Board, manual

Model RS422AT-P

Faxline Document #:1129



FEATURES

- RS422/485 Interface
- Selectable Address
- Two or Four Wire Operation
- Short Slot
- PC/XT/AT Compatible
- Max. Baud Rate 56k
- 0 to 60°C
- 16450 UART

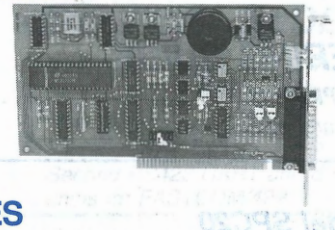
LIFETIME GUARANTEE!

ORDERING GUIDE

Model RS422AT-P ..... **$ 129.00**
Board, Manual, Driver Software

Model RS422I-P

Faxline Document #:1128



FEATURES

- OPTICALLY ISOLATED Communications
- Distances to 5000 Feet
- RS422/485 With Half/Full Duplex Operation
- 16450 UART
- Compatible With PC/XT/AT & 386 Systems
- Half Card Length

LIFETIME GUARANTEE!

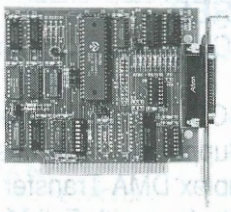
ORDERING GUIDE

Model RS422I-P ..... **$ 195.00**
Board, Manual, Driver Software

FREE Technical Support

Model ACB2

Faxline Document #:1084



The ACB2 advanced communication board provides the IBM PC/XT/AT and compatibles with a synchronous high-speed DMA communication port. The ACB2 supports RS232 and RS422 communications.

FEATURES

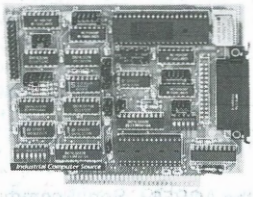
- Sync/Async Operation Using 8530 SCC
- Selectable Port Address, IRQ Level, & DMA Channel
- Supports TD, RD, RTS, CTS, RXC, & TXC Signals
- External Clock Jumper for Transmit Clock
- DMA to 880k Baud
- SDLC, HDLC & X.25 Compatible

ORDERING GUIDE

Model ACB2 ..... $ 299.00

Model ACB3

Faxline Document #:1030



The ACB3 advanced communication board provides the IBM PC/XT/AT and compatibles with synchronous high-speed DMA communication port. The card supports 2, RS-232 communication ports. The ACB3/SP is a single port version

FEATURES

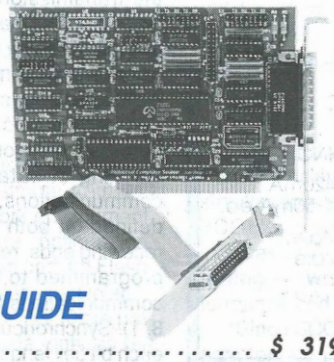
- Two Channels of Sync/Async Communications Using 8530 SCC
- DMA Supports Data Rate to 880K
- Selectable Port Address, IRQ Level (2, 3, 4, 5) and DMA Channel 1 or 2
- RS232 Interface With Full Modem Control
- Supports TD, RD, RTS, CTS, DSR, DCD, DTR, TXC, RXC, TT Signals
- Jumper Options for Clock Source and I/O
- On-Board EPROM Socket (16KB or 128KB)

ORDERING GUIDE

Model ACB3 ..... $ 319.00
Model ACB3/SP ..... $ 169.00

Model ACB4

Faxline Document #:1029



FEATURES

- RS422/530/485 Communications
- Two Channels of SYNC/ASYNC Communications Using 8530 SCC Chip
- Full Modem Control RS530
- Selectable Address/IRQ
- DMA to 880K Bits Per Second
- T1 and F-T1 Pipeline Interface
- S/W Programmable Baud Rate
- Supports TD, RD, RTS, CTS, DSR, DCD, DTR, TXC, RXC, LL, RL, TM Signals

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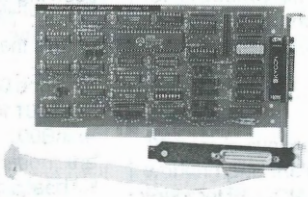
Model ACB4 ..... $ 319.00

Model ACB4-AT

Faxline Document #:1028



FEATURES

- All Features of ACB4 Plus
- Half or Full Duplex on Both Channels at the Same Time For XMIT or REC
- IRQ Levels 2-5, 7, 10-12, & 15
- DMA Channels 0, 1, 2 or 3
- Jumper Options for Clock Source and Input/Output Mode

ORDERING GUIDE

Model ACB4-AT ..... $ 339.00
Model ACB4-AT/16MHZ..... $ 429.00

High speed version required for use with PCI CPUs

Sync/Async RS-232/V.35
with RS-232 CSU/DSU Interface

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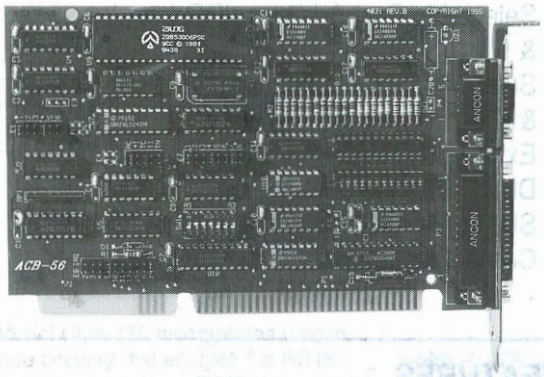
Receive a detailed FAX within Minutes!

Model ACB56



FEATURES

- Single Channel Sync/Async w/ CSU/DSU Control Port
- 8530 SCC (Serial Communications Controller)
- DMA Supports Data Rates Greater Than 1Mbps
- Full Duplex DMA Transfer Capability
- V.35 Interface with Full Modem Control Signals
- Clocks can be Inverted for Unique Installations
- Software Programmable Baud Rates
- Software Developer's Tool Kit Included with Source Code

NEW!

The Model ACB56 provides the PC with two communication ports. One is a single Synchronous/Asynchronous channel that is jumper selectable as RS-232 or V.35, and a single Asynchronous RS-232 port. The Asynchronous RS-232 port can be used to control and monitor a CSU/DSU. The Asynchronous port can also be used as an ISDN interface.

Some other situations where the ACB56 can be used include applications requiring protocols such as SDLC, HDLC, X.25, MONOSYNC, BISYNC, and ASYNC. The card can also be used in Fractional T1 pipelines and as an interface to the AS/400. The ACB56 also functions in Switched 56k and 64kbps applications.

Tech. Tip:

Serial communicatioins in most PC applications is Asynchronous. Asynchronous communications is not the best solution when higher data rates are required. Synchronous communications is faster because it does not have the charater synchronization overhead of start or stop bits. Character synchronization can be achieved by many different methods when using Synchronous commnuications. A common method of character synchronization is implemented by the transmission of "sync characters" or "sync flags". Character synchronization is accomplished by transmitting a pre-defined bit pattern, allowing the receiver to lock-on to the correct alignment of the data stream.

Synchronous communications differs from Asynchronous communications in the clocking of data bits. In Asynchronous communications, bit cell lengths are predefined on both the transmitting and the receiving ends, requiring that both nodes be programmed to the same data rate and communications parameters (e.g. 9600, n, 8, 1). Synchronous communications defines each bit cell length using an additional clock signal provided by the transmitting node, receiving node, or an independent clock source. The source of the clock signal controls the data rate for the transmitter and receiver.

SPECIFICATIONS

SCC	8530-6
Number of Ports	Single Sync/Async RS-232/V.35 w/ Async RS-232
Max. Data Rate	1.2288Mbps
Max. Data Distance	Up to 100ft
Operating Temperature	0 to 50°C
Storage Temperature	-20 to 70°C
Humidity	0 to 90%RHNC
Power Requirements	+5VDC @ 420mA ±12VDC @ 50mA ea.
Connectors	(1) DB-25 Male, (1) DB-9 Male

ORDERING GUIDE

Model ACB56 . . . . . $ 199.00
Card, manual, software

Model CAB/V35-36 . . . $ 50.00
V.35 Interface cable, 36" (914mm)

Model CAB-104 . . . . . $ 15.00
DB-25 M-F cable, 6' (1828.8mm)

3COM®, Intel®, Cogent®, XirCoM®
Ethernet Network Cards

Model	Manufacturer/Description	AUI	BNC	TP	Speed (Mb/sec)	PC Bus	Price
	3COM						
3C509BTP	TP only, 16-bit ISA			x	10	ISA	$ 125.00
3C509B	Coax, 16-bit ISA	x	x		10	ISA	$ 135.00
3C509BC	Combo for all 3 network types, 16-bit ISA	x	x	x	10	ISA	$ 150.00
3C579	Coax with EISA bus	x	x		10	EISA	$ 275.00
3C579TP	TP with EISA bus			x	10	EISA	$ 275.00
3C590C	Combo with 32-bit PCI bus	x	x	x	10	PCI	$ 199.00
3C589BTP	TP only, PCMCIA			x	10	PCMCIA (II)	$ 189.00
3C589BC	TP and thin coax, PCMCIA		x	x	10	PCMCIA (II)	$ 245.00
3C595TX	Fast Ethernet on a 32-bit PCI bus, TP			x	10/100	PCI	$ 285.00
	Intel						
PCLA8220A	TP, 16-bit ISA			x	10	ISA	$ 115.00
PCLA8210A	Coax, 16-bit ISA		x	x	10	ISA	$ 120.00
PCLA8200A	Combo for all 3 network types, 16-bit ISA	x	x	x	10	ISA	$ 140.00
PCLA8225A	TP only, 16-bit ISA, w/ Flash			x	10	ISA	$ 125.00
PCLA8205A	All 3 connections, 16-bit ISA, w/ Flash	x	x	x	10	ISA	$ 150.00
EILA8225	All 3 connections, 32-bit EISA, w/ Flash	x	x	x	10	EISA	$ 269.00
EILA8265	10/100, 32-bit EISA bus		x	x	10/100	EISA	$ 299.00
PILA8465	10/100, 32-bit PCI bus		x	x	10/100	PCI	$ 259.00
BOOT8100	Boot ROM for NetWare						$ 39.00
BOOT8400	Boot ROM for LAN Manager						$ 39.00
	Cogent						
EM525C	Combo for all 3 network types, 16-bit ISA	x	x	x	10	ISA	$ 99.00
EM960TP	Full Duplex, 32-bit PCI			x	10/20	PCI	$ 169.00
EM960C	Combo, Full Duplex, 32-bit PCI	x	x	x	10/20	PCI	$ 199.00
EM964TP	4-port Full Duplex, 32-bit PCI, TP			x	10/20 (x4)	PCI	$ 630.00
EM110TX	10/100, 32-bit PCI bus			x	10/100	PCI	$ 229.00
EM100	Full Duplex Fast Ethernet, 32-bit PCI			x	100/200	PCI	$ 249.00
EM400	4-port Fast Ethernet FDE, 32-bit PCI			x	100/200 (x4)	PCI	$ 1395.00
	Xircom						
PE310BT	TP only, pocket laptop adapter			x	10	Parallel port	$ 349.00
PE310B2	Thin only, pocket laptop adapter		x		10	Parallel port	$ 349.00
PE310BX	Thick only, pocket laptop adapter	x			10	Parallel port	$ 399.00
PS10BC	TP and thin, PCMCIA (Type II)		x	x	10	PCMCIA II	$ 259.00
PS10BT	TP only, PCMCIA (Type II)			x	10	PCMCIA II	$ 199.00
PEM10B2	TP only, pocket Ethernet+14.4 modem			x	10	Parallel port	$ 599.00
PEM10BT	Thin only, pocket Ethernet+14.4 modem		x		10	Parallel port	$ 599.00
CEM10B2	TP only, PCMCIA Ethernet+14.4 modem			x	10	PCMCIA II	$ 499.00
CEM10BC	TP and thin, PCMCIA Ethernet+modem		x	x	10	PCMCIA II	$ 569.00

INTEL ®

"Intel's EtherExpress adapters are reliable, affordable and simple-to-install solutions for every network environment. With the intuitive software configuration, auto-connection detection and the Flash-upgradable option, nothing is simpler."

"Intel's EtherExpress PRO/10 are premium adapters that include features like on-board cache memory for improved performance. The Flash memory lets you remotely update drivers, inventory PC configurations and maintain powerful anti-virus protection."

"Intel's EtherExpress 10/100 adapters are fully compatible with current 10BaseT networks and the new, faster 100Base-TX technology. During installation, the card will auto-sense the correct speed for trouble-free operation. Nothing is easier."

3COM®

"3COM's Etherlink III unique patented Parallel Tasking speeds data transfers by simultaneously performing multiple tasks. 3COM's unique, proven technology includes an ASIC design and auto driver-tuning — which promotes high performance and reliability."

"Since 3COM's Fast Etherlink 10/100 adapters can operate at either 10Mbps and 100 Mbps, these adapters are perfect for gradually upgrading your existing Ethernet network to 100 Mbits or using only the latest technology."

XIRCOM®

"Xircom is synonymous with mobile networking and their new combo modem/Ethernet PCMCIA cards are nothing short of exceptional. Or get the standard Ethernet card — whatever you choose. Xircom is the great choice for laptop connectivity."

COGENT®

"Cogent adapters offer superior features for the power user. The FDE (Full Duplex Ethernet 20Mbps) adapters are perfect for resource-intensive operations such as high-resolution graphics, multimedia and mission-critical applications."

"The 4-port adapters are ideal for server and resource-intensive environments — where performance is crucial, and PC slots are at a shortage. The EM964TP won Network Computing Editor's Choice Award (7/95), Infoworld's Top Score Award (6/95) and the Best of the Show Award at the Networld + Interop Show (4/94)"

"Cogent's Fast Ethernet (100Base-TX) adapters not only feature a 32-bit bus mastering design, and Predictive Pipelining for optimum performance but also has full duplex capability (effectively doubling bandwidth for switched networks)!"

Klever® Ethernet Hub

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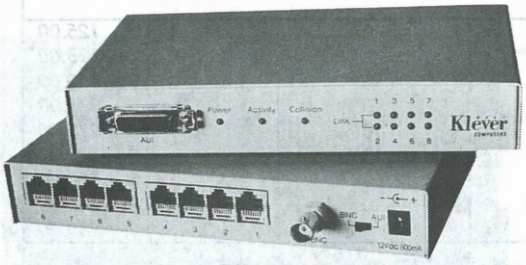
For Small Offices

Model UTP8L



FEATURES

- Complies with IEEE802.3 10BaseT
- Three LEDs to Indicate Activities of the Hub
  - Collision LED
  - Activity
  - Power LED
- Provides 9 Port Ethernet Multi-Port Repeater
  - 8 Twisted Pair Port
  - 1 BNC/AUI Port
- Jabber Function to Isolate Network Failures (Auto-Partition)
- Automatic Preamble Generation Minimizes Bit Loss

The UTP8L Ethernet 10BaseT hub is designed for plug-n-play use in a UTP (Unshielded Twisted Pair) LAN environment. The hub combines high performance with a low-cost hardware solution. The cost effective design includes 8 twisted pair ports and 1 BNC/AUI port. All 9 ports are functionally equivalent and can be used for direct connection devices with the appropriate Ethernet interfaces.

Faxline Document #:1220

ORDERING GUIDE

Model UTP8L ..... $ 150.00
8 port 10BaseT hub with BNC/AUI

Tech. Tip:

With auto-partitioning for each port, the hub will automatically disconnect a device producing noise or excessive collisions. The device will automatically be reconnected when the error condition is cleared. Data packets are automatically truncated. This prevents a device from blocking the network by transmitting a continuous data stream and illegal packets.

Tranceivers

ORDERING GUIDE

Model MIL05T ..... $ 49.00
AUI to BNC
Model MIL10P ..... $ 49.00
AUI to RJ45
Model MIL01FA ..... $ 265.00
AUI to FOIRL-SMA
Model MIL01V ..... $ 175.00
AUI w/Vampiretap
Model MIL02F ..... $ 299.00
Half/Full duplex, 10 Base FL, Ethernet transceiver

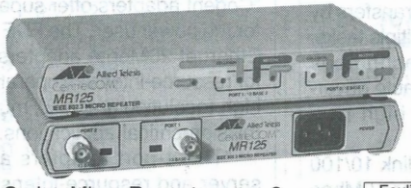
Model MIL05T

FEATURES

- Converts 15-pin AUI Ethernet Port to Other Media
- Small Size 2.5" x 1.75" x .75" (64 x 45 x 19mm)
- Rugged, Reliable and Portable
- LEDs Indicate Power and SQE
- SQE Jumper Selectable

Ethernet Repeaters

Model MR125



The MR12x Series Micro Repeaters are 2 port media extenders designed for the coax media and Unshielded Twisted Pair (UTP) markets. The MR12x Series allow connections between different media, such as UTP (10BaseT), thin coax (10Base2), and thick coax (10Base5) in any combination. Segments on either side of the unit support full length, fully repeated transmission, and allow the maximum number of nodes specified by IEEE 802.3. The MR12x Series utilize state-of-the-art technologies, including a custom ASIC and Surface Mount Technology, which provide enhanced functionality, increased reliability, and improved performance.

Faxline Document #:1114

FEATURES

- Dual-Port Configuration
- IEEE 802.3 10BaseT, 10Base2, & 10Base5, FOIRL Compliant
- Automatic Polarity Detection and Correction on UTP Ports
- Automatic Segment Partitioning and Jabber Lock-up Protection
- 100-230 Volt Operation
- FCC, UL, CSA, (TUV-GS pending)

ORDERING GUIDE

Model MR121T..... $ 390.00
AUI to RJ45
Model MR122T..... $ 390.00
BNC to RJ45
Model MR123 ..... $ 575.00
AUI to AUI
Model MR124 ..... $ 575.00
AUI to BNC
Model MR125 ..... $ 675.00
BNC to BNC
Model MR126F ..... $ 825.00
AUI to FOIRL
Model MR127F ..... $ 825.00
BNC to FOIRL

Free Technical Support

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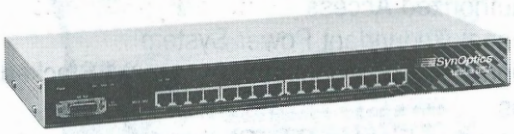
Ethernet Hubs and Concentrators

Concentrators and Hubs are the basic building blocks for 10BaseT networks, and no company is better known for its products than SynOptics. Now merged with Wellfleet to form BayNetworks, users are guaranteed even greater product compatibility and selections than before.

For Department Networks

Model 2800A



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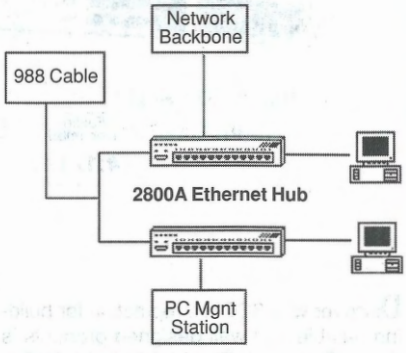


Featuring 16 RJ45 ports and 1 AUI port, the 2800A is affordable and ideal for small Ethernet networks. With plug-n-play operation, a built in power supply and front panel diagnostics LEDs, the 2800A is the simple choice.

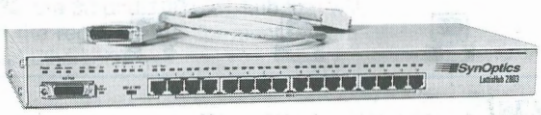
ORDERING GUIDE

Model 2800A . . . . . $ 775.00
Single rack unit (19") Ethernet Hub, 16-port unmanaged

Model 988 . . . . . $ 35.00
Expansion cable to connect hubs

For Entry-Level Networks and Growing LANs

Lattis™ System 2000



Faxline Document #:1215

Each hub has 16 RJ45 managed ports and an AUI or ST fiber port. Up to 5 hubs can be interconnected to support up to an 80 node cluster. The 2803 and 2804 have built-in management that allow users to monitor and diagnose individual ports. For users requiring in more management capabilities, the 2813 and 2814 offer SNMP and RMON.

ORDERING GUIDE

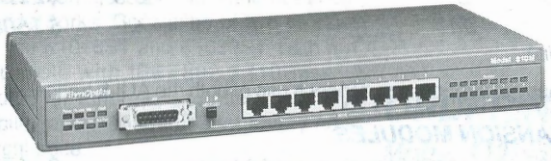
Model	Managed	SNMP	RMON	AUI	ST-Fiber	Price
2803*	•			•		$ 869.00
2813-04	•		•	•		$ 2129.00
2813-05	•	•		•		$ 1355.00
2804*	•				•	$ 1159.00
2814-04	•		•		•	$ 2420.00
2814-05	•	•			•	$ 1645.00

ACCESSORY
988 *Expansion cable to connect hubs* $ 35.00

* Expansion cable provided

For Small Offices

Lattis™ System 800



Faxline Document #:1216

This 8 port 10BaseT hub is perfect for small Ethernet environments. Plug-n-play, this hub lets users quickly and easily build networks without any fuss. The 800 is a managed hub while the 810M also has integrated SNMP capabilities for even more complete control and diagnostics.

ORDERING GUIDE

Model 800 . . . . . $ 290.00
8-port RJ45, 1 AUI

Model 810M . . . . . $ 775.00
8-port RJ45, 1 AUI, w/SNMP

ACCESSORY
Model 980-647 . . . . . $ 35.00
19" rack mount kit

3COM®
Stackable Ethernet Hubs

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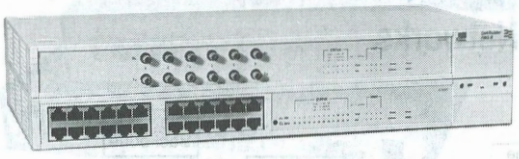
LinkBuilder® FMS II Series



Faxline Document #:1217

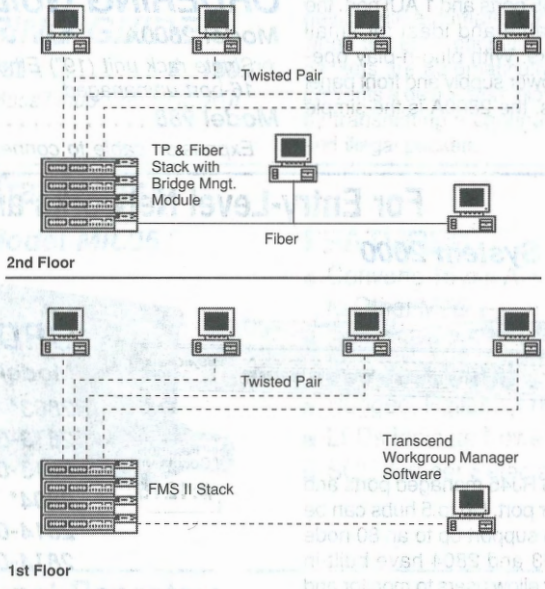
FEATURES

- Mixed-Media: 12 and 24-Port RJ45, 6-Port ST Fiber or a 24-Port Telco Hub
- Standard RMON Support for Tracking, Storing, and Analysis of Network Traffic
- Uses 3COM's Patented LAN Security Architecture to Protect Sensitive Data from Unauthorized Access
- Optional Redundant Power System
- Optional SNMP Module to Manage All Stacked Hubs
- Stack up to Eight in One Cluster

Discover why 3COM's reputation for building reliable and well designed products is richly deserved. The LinkBuilder FMS II Stackable Ethernet Hubs provide flexible, easy-to-configure systems for departmental and remote offices.

As part of 3COM's SuperStack strategy, the FMS II series supports every Ethernet media type and is fully compatible with other units that support token ring, SNA, remote access, routing, and switching. LinkBuilder FMS II Stackable Ethernet Hubs can keep your initial investment low, letting you add and expand however and whenever you need.

To expand or mix and match your network, simply attach the Linkbuilder cable (Model 3C625), or slide in the management board to manage a stack. Use the table provided to quickly determine which model is ideal for your needs.



Tech. Tip

Don't hesitate to contact Industrial Computer Source's Application Engineering Staff for free advice on designing and building your network.

ORDERING GUIDE

STACKABLE HUBS

Model	Connection	# of Ports	AUI Port	-Trans Int/ Bridge Slot	Max. # ports	Price
3C16670	TP(RJ45)	12	1*	1*	104	$ 855.00
3C16671	TP(RJ45)	24	1	1	208	$1500.00
3C16665	Fiber (ST)	6	1	1	208	$2225.00
3C16672	Telco (TP-50 pin)	24	1	1	64	$ 1500.00

* The 12-port TP hub does not support simultaneous use of both the AUI & tranceiver port.

ACESSORIES & EXPANSION MODULES

3C16630	Linkbuilder FMSII Management Module	$ 679.00
3C15000D	Transcend Workgroup Manager (V3.0)	$ 675.00
3C16630	Linkbuilder FMSII Management Module	$ 679.00
3C16040	Linkbuilder FMSII Bridge Management Module	$ 1649.00
3C18011	Linkbuilder FMSII Redundant Power Supply	$ 1215.00
3C16060	Bridge Micro Module (Plug-in)	$ 729.00
3C625	Expansion cable for attaching stackables	$ 59.00
3C16050	19" Rack Mount Kit	$ 49.00

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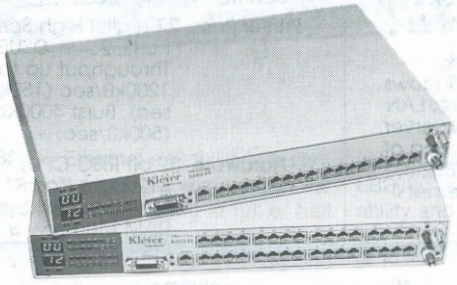
Klever® Ethernet Workgroup Hubs

K1016 & K1032 Series

For Departmental Networks



FEATURES

- UTP Connectors for Flexibility
- Fiber, BNC, and AUI Backbone Connectors for Multi-Media Applications
- Reliability—Failure in One Hub Does Not Affect the Others
- Easy to Read Numerical Display on Front Panel
- Shows Percent Bandwidth & Collisions

Faxline Document #:1218

The KleverHUB™ family of 10BaseT workgroup hubs offer more advanced features than other comparable 10BaseT hubs at a lower cost per unit. Consisting of two product sets: the K1016 and K1032, both versions are available with a Fiber port (F).

The Model K1016 is a 16 port 10BaseT hub that can serve as an entry level hub for up to 16 users in a workgroup. The Model K1032 is a 32 port 10BaseT hub that will meet the requirements for most departmental Ethernets.

ORDERING GUIDE

Model K1016S . . . . . $ 699.00
16 port Smart 10BaseT Hub, BNC and AUI ports

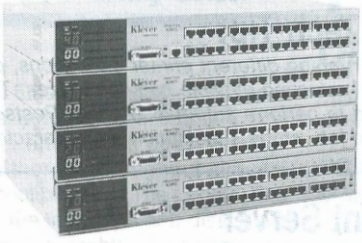
Model K1016SF . . . . . $ 999.00
16 port Smart 10BaseT Hub, w/Fiber, BNC, and AUI ports

Model K1032S . . . . . $ 1399.00
32 port Smart 10BaseT Hub, BNC, and AUI

Model K1032SF . . . . . $ 1699.00
32 port Smart 10BaseT Hub, Fiber, BNC, and AUI

Model K1032ST

Stackable Hubs



FEATURES

- 32 or 16 UTP/STP Ports per Hub
- 1 AUI Port per Hub
- 1 Optional Port per Hub AUI to Fiber, **or** BNC, **or** UTP
- Stacks up to 4 Hubs for 128 UTP/STP Ports and 4 AUI and 4 Optional Ports
- Upgradable to SNMP Management
- In-Band and Out-of-Band Management

Faxline Document #:1219

The KleverHUB™ family of 10BaseT workgroup hubs offer the lowest connectivity cost per managed ports for Ethernet Local Area Networks. Consisting of two product sets: the K1016ST and K1032ST, both are compatible with IEEE802.3 (10BaseT) standard for Ethernet, and offers flexibility, reliability and management at a very economical price.

The Model K1016ST is a 16 port stackable 10BaseT hub that can serve as an entry level hub for up to 16 users in a workgroup. The Model K1032ST is a 32 port stackable 10BaseT hub that will meet the requirements for most departmental Ethernets. Both hubs feature modular RJ45 host ports for unsheilded/shielded twisted pair connections on the front panel.

Tech. Tip:

Combine the SNMP module with the KVIEW Windows-based software to build and maintain a controlled, managed network.

ORDERING GUIDE

Model K1016ST . . . . . $ 895.00
16 port Stackable 10BaseT Hub, AUI and Custom port

Model K1032ST . . . . . $ 1685.00
32 port Stackable 10BaseT Hub, AUI and Custom port

ACCESSORY

Model KSNMP . . . . . $ 699.00
SNMP Module

Model KVIEWIB . . . . . $ 399.00
Windows-based SNMP, In-band Network Management software

Model KBVIEW00B . . . . $ 399.00
Windows-based SNMP, Out-of-band Network Management software

Print Servers
for Ethernet & Token Ring

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2-Port for Workgroups

Model AXIS150

Faxline Document #:1243

SPECIFICATIONS

Logical Connections Ethernet Network, running any Combination of Windows 3.x, Windows for Workgroups 3.x, Windows95, Windows NT 3.x, NetWare, LAN Manager, LAN Server. Automatic Sensing of IEEE802.2, IEEE802.3, SNAP and Ethernet II Frame Types.

Network Attachments 10BaseT RJ45 Ethernet

Printer Ports 2 Parallel High Speed Ports, 25 Pin DSUB. Throughput up to 1200kB/sec (150kB/sec), Burst 4000Kbps (500kB/sec)

Hardware 32 bit RISC CPU, 512Kbyte Flash Memory, 128Kbyte RAM Memory

ORDERING GUIDE

Model AXIS150 . . . . . $ 399.00
Multiprotocol Ethernet print server for Workgroups

Multi-Protocol Ethernet Print Server

Model NPS530

Faxline Document #:1244

Faxline Document RISC #:1212

SPECIFICATIONS

Network Management SNMP-MIB II Compliant, Private Enterprise MIB Included

Logical Connections Ethernet Network, Running any Combination of TCP/IP, NetWare, Windows NT, LAN Manager, LAN Server and Apple EtherTalk.

Attachments NPS530 10BaseT (Twisted Pair) Ethernet
NPS532 10Base2 (Thin) Ethernet
NPS550RISC Both 10BaseT and 10Base2

‡Logical Printers A Logical Printer is an Advanced Device Driver Acting in between the Network and the Printer. Axis NPS530/532/550RISC has a set of 8 Fully Programmable Logical Printers

Parallel Printers Centronics Standard IEEE1284 Bidirectional Parallel Port

ORDERING GUIDE

Model NPS530E . . . . . $ 395.00
Multiprotocol Ethernet pocket server, 10BaseT (RJ45)

Model NPS532E . . . . . $ 395.00
Multiprotocol Ethernet pocket server, 10Base2 (BNC)

Model NPS550RISC . . . . $ 595.00
RISC Based, Multiprotocol Ethernet print server, 10Base2 (BNC) and 10BaseT (RJ45). 2 parallel ports, 1 serial port RS232C

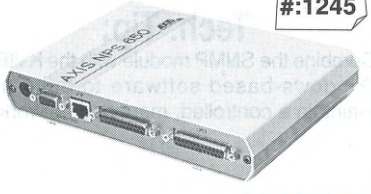
‡ Tech Tip:

The logical printers are useful for running different printer emulations, printing from a multi-host environment and selecting multiple bins/form sizes. The logical printer drivers can be programmed to perform automatic ACII to Postscript conversion, string before or after a job, string substitution and character set conversion

Multi-Protocol Token Ring Print Server

Model NPS650

Faxline Document #:1245



The NPS650 connects your printers anywhere on a token ring network, allowing all network users access to shared printer resources

SPECIFICATIONS

Network Management SNMP-MIB II Compliant, Private Enterprise MIB Included

Logical Connections Token Ring Network, Running any Combination of TCP/IP, NetWare, Windows NT, LAN Manager and LAN Server, LLC IEEE802.2, MAC IEEE802.5. Early Token Release Supported for 16Mbps

Attachments Media Type 1/DB9/STP and Type 3/RJ45/UTP. Support for 4 and 16Mbps Networks

‡Logical Printers Logical Printer Concept gives you a Set of Eight Fully Programmable Logical Printer Drivers that Correspond to Each of the Three Printer Ports Available

Parallel Printers 2 Parallel Ports

Serial Printer 1 Ser. Port RS232C

ORDERING GUIDE

Model NPS650 . . . . . $ 795.00
Multiprotocol Token ring print server

Highest Quality

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Model LB2000

Faxline Document #:1223

FEATURES

- 12 Port Stackable Ethernet Switch
- 120Bbps Total Effective Bandwidth
- 40 Micro Seconds Fixed Latency
- Completely Nonblocking and No Ethernet Frame Loss
- 100% Throughput
- Plug-and-Perform Management
- Upgradeable to FDDI, Fast Ethernet, ATM

The LB2000 Ethernet switching hub contains a 12 port module. Every port on the LB2000, whether operating at full or half duplex Ethernet speeds, can transmit/receive at full capacity, simultaneously and without any loss of performance.

The LB2000 is SNMP-managed and supports the 802.1d spanning tree routing algorithm to prevent loops and to support network fail-safe redundancy. In addition, the LB2000 features full duplex Ethernet capability and easy connectivity to high bandwidth devices based on Fast Ethernet, ATM or FDDI.

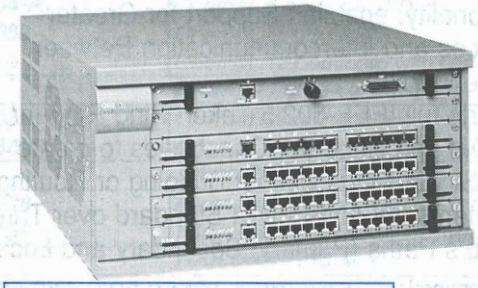
ONET's family of Ethernet switches increases your network's performance while protecting your investment in existing infrastructure.

ORDERING GUIDE

Model LB2000 ..... **$9540.00**
12 port switching hub w/SNMP and back-pressure architecture

Model LB1000 ..... **$5940.00**
12 port standalone switch, no back pressure, no SNMP

Model LB5000



For pricing, simply add the individual model prices listed in the Ordering Guide.

Faxline Document #:1224

FEATURES

- 12 to 48 Port Ethernet Switch
- 480Mbps Total Effective Bandwidth
- 40 Micro Second Fixed Latency
- Completely Non-blocking with No Ethernet Frame Loss
- 100% Throughput Performance
- Plug-and-Perform Management and Redundant Power Supplies for Fail-Safe Operations
- Modular Design and Hot Swapping for Easy Expansion
- Upgradeable to FDDI, Fast Ethernet, ATM

The LB5000 Ethernet switching hub, based on ONET's innovative MetaSwitching architecture, enables all ports to reach maximum Ethernet throughput simultaneously without blocking. The LB5000 fully implements the industry's first distributed ASIC-based cell-architecture providing excellent performance, high integration level, high reliability and excellent design security.

The scaleable LB5000 Etherent switching hub contains four slots, each capable of holding a 12 port module, thereby supporting configurations of between 12 and 48 ports.

The LB5000 Ethernet switching hub maintains a fixed 40 µsec cut-though delay for all types of communications. Because the latency remains constant, both network load and retransmission overhead are minimized. High-performance, Fixed-latency and the Modular Interface makes the LB5000 ideal for bandwidth-intensive environments—like hi-res graphics, video and multimedia.

ORDERING GUIDE

Model LB5000 ..... **$4995.00**
Chassis and Power Supply ***ONLY***

POWER SUPPLY OPTION

Model PS5000 ..... **$1995.00**
Additional Power Supply

INTERFACE MODULES

Model M8T **$1850.00**
Module 8 RJ45

Model M4T/1A **$990.00**
Module 4 RJ45 + 1 AUI

Model M4T/1F **$1479.00**
Module 4 RJ45 + 1 F.O

Model M4F **$2935.00**
Module 4 port F.O

Model M6C **$2975.00**
Module 6 port BNC

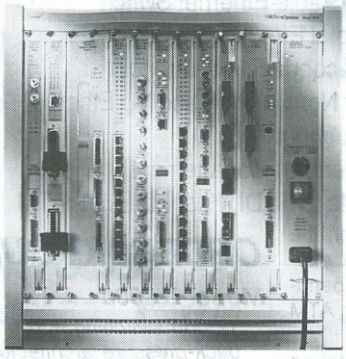
REQUIRED EXPANSION MODULES

Each LB5000 **MUST include at least 2** Interface Modules on the main board according to the following table. Customers **MUST** select one module from **Column 1** and the corresponding module in **Column 2**. Additional modules can be added on a per-slot basis—up to 4 modules in a single chassis.

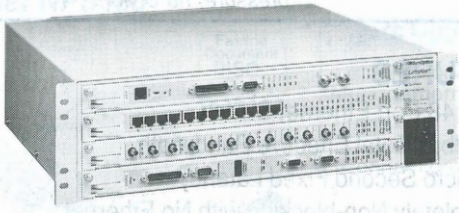
Column 1	Column 2	Description
M8T	M4T/1A	*12 port RJ45 or 11 port RJ45 +1 AUI*
M8T	M4T/1F	*11 port RJ45 + 1 F.O.*
M8T	M4F	*8 port RJ45 + 4 F.O.*
M8T	M6C	*6-8 port RJ45 + 6 - 4 BNC*
M4F	M4F	*8 port F.O. (2 additional RJ45 instead of management)*
M6C	M6C	*12 port BNC*
M6C	M4F	*6 port BNC + 4 port F.O.*

Bay Networks™ (SynOptics)
LattisNet Systems 3000 Concentrators

Model 3000N (12-Slot)



Model 3030-01-HN (4-Slot)



FEATURES

- Multiple Bus Architecture allows Integration of 5 Ethernet, 2 Token Ring and 3 FDDI Networks into a Single Platform
- Modular Design, along with a Wide Choice of Modules, Enables the Model 3000 to be Customized to meet Specific Networking Needs
- Support for Integrated Ethernet Switching, Bridging and Routing Eliminates need for External Equipment
- Media Flexibility Provides Support for Unshielded Twisted Pair, Shielded Twisted Pair, Coaxial and Fiber Optic Ethernet, Shielded Twisted Pair and Unshielded Twisted Pair Token Ring, and Shielded Twisted Pair and Fiber Optic FDDI from a Single Platform
- Supports full IEEE 802.3 Ethernet Repeater Functionality, enabling Support for Greater Distances and Intercommunication Between Multiple Media Types
- Supports full IEEE 802.5 Token Ring Ring-In/Ring-Out and Repeater Capabilities to create Large Single Rings without Bridging or Routing
- Implements full ANSI FDDI Standard over Three 100 Mb/s Paths (Primary, Secondary and Local)

System 3000 concentrators feature a multiple-bus backplane architecture which enables them to simultaneously support a combination of 10 megabit per second (Mb/s) Ethernet, 4 Mb/s and 16 Mb/s Token Ring, and 100 Mb/s Fiber Distribution Data Interface (FDDI) networks. Through a variety Ethernet, Token Ring and FDDI connectivity, internetworking and networking management modules, you can create custom configurations that meet your specific networking needs.

A single Model 3000 can simultaneously support 5 independent Ethernet segments, 2 Token Ring networks and 3 FDDI paths, delivering maximum flexibility for a wide variety of network topologies.

The Model 3000 chassis offers 12 slots to hold any combination of System 3000 modules supporting IEEE 802.3-compatible Ethernet over unshielded twisted pair wire, shielded twisted pair wire, fiber optic cable or thin coaxial cable; IEEE 802.5-compatible Token Ring over unshielded or shielded twisted pair wire; an American National Standards Institute (ANSI) X3T9.5 FDDI over fiber optic cable and shielded twisted pair wire.

When configured in an Ethernet network with a retiming or networking management module, the concentrator provides full IEEE 802.3 repeater functionality. The System 3000 concentrator can also accommodate LattisNet™ Ethernet Switching Engines™ as well as local and remote bridges and routers, delivering integrated internetworking solutions from a single platform.

The Model 3000 can be installed in 2 mounting arrangements: on a table top or in a EIA-standard 19-inch equipment rack, which can hold 11 rack-mounting units. Four different versions of the concentrator are available.

MULTI-SEGMENT ETHERNET

The Model 3000N Premise Concentrator includes a chassis, a front-accessible modular fan tray, a front-accessible Model 3002 460W power supply, and a backplane bus capable of supporting up to 5 independent, manageable Ethernet segments. The backplane also includes a dedicated network management interface bus and power supply bus.

MULTIPLE ETHERNET/TOKEN RING NETWORKS

The Model 3000NT Premise Concentrator is identical to the Model 3000N, with the addition of two Token Ring buses on the concentrator backplane. The Token Ring buses support two independent, manageable Token Rings, each of which can operate at either 4 Mb/s or 16 Mb/s.

ETHERNET, TOKEN RING AND FDDI

The Model 3000S Premise Concentrator is identical to the Model 3000NT, with the addition of an FDDI bus configured to support up to three separate ring paths, primary, secondary or local-running at 100 Mb/s.

REDUNDANT POWER SUPPLIES

The Model 3030 Department Concentrator is a four-slot version of the Model 3000, designed for medium-density departmental networks. Like the Model 3000, the Model 3030 accommodates any combination of System 3000 host, network management or internetworking modules supporting both Ethernet and Token Ring.

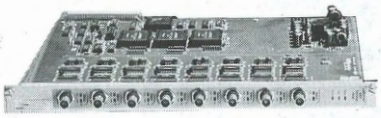
ETHERNET ONLY

The Model 3030-01 includes a chassis, an easily-accessible power supply/fan unit, and a backplane with Ethernet, network management interface and power supply buses.

ETHERNET/TOKEN RING

The Model 3030-04 is identical to the Model 3030-01 and includes two Token Ring buses on the concentrator backplane. The Token Ring buses support two independent Token Rings, each of which can operate at either 4 Mb/s or 16 Mb/s. The Model 3030-04 can support three networks-one Ethernet and two Token Ring-simultaneously.

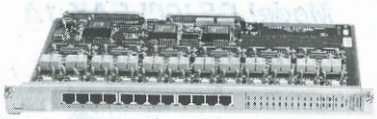
Bay Networks™ (SynOptics)
LattisNet Systems 3000 Concentrators



SPECIFICATIONS

NETWORK PROTOCOLS

Ethernet 10 Mbps
Token Ring 4/16Mbps
FDDI 100 Mbps (Model 3000S)



ORDERING GUIDE

Model	Description	Faxline Document #	Price
	3000 Chassis		
3000N	12-slot, Ethernet-Only Chassis	1263	$ 2229.00
3000NT	12-slot, Ethernet & Token Ring Chassis	1263	$ 2615.00
3000NTR	Same as 3000NT w/ redundant power supply & 3100R management module	1263	$ 3875.00
3000S	12-slot, Ethernet, Token Ring & FDDI Chassis	1263	$ 3875.00
3000SRC/R/02	Same as 3000S w/ redundant power supply & 3100R management module	1263	$ 5235.00
3030-01-HW	4-slot Ethernet-only Chassis	1263	$ 729.00
3030-04-HW	4-slot, Ethernet & Token Ring Chassis	1263	$ 965.00
	3000 Ethernet Host Modules		
3301	Ethernet, 8-port Thin coax (BNC)	1260	$ 1740.00
3304-A	Ethernet, 8-port Fiber (ST)	1260	$ 2225.00
3308B	Ethernet, 12-port RJ-45	1260	$ 1355.00
3368	Ethernet, 12-port RJ-45 with LattisSecure	1260	$ 1549.00
	Ethernet Retiming Modules		
3333	Ethernet, Retiming module - Coax (AUI)	1260	$ 729.00
3334-ST	Ethernet, Retiming module - Fiber (ST)	1260	$ 1019.00
	Token Ring Host Modules		
3502B	Token Ring, 12-port Passive STP/UTP (RJ-45)	1258	$ 1060.00
3505B	Token Ring, 12-port Active STP/UTP (RJ-45)	1258	$ 1450.00
	FDDI Host Modules		
3904	FDDI, 4-port multi-mode fiber (MIC)	1261	$ 5330.00
3905	FDDI, 4-port STP (RJ-45 shielded)	1229	$ 3639.00
	Ethernet Internetwork Modules		
3328	Ethernet, 6-port Switching Engine (RJ-45)	1229	$ 3195.00
	Routers/Bridge Modules		
3394	Ethertalk (Localtalk), Router module	1250	$ 3489.00
3800-03	Ethernet, Multimedia Module (Router w/ 3800A)	1250	$ 4160.00
3803	Ethernet, Personality Module for Port Routing (for 3800A routers)	1250	$ 675.00
3806	WAN, 2-port (Serial) Personality Module for Port Routing (for 3800 routers)	1250	$ 1159.00
10328-F	Ethernet to ATM, 12-10BaseT, 1-SONET OC-3 (155Mbps), Switch/MUX	1275	$ 9995.00
	Token Ring Internetwork Modules		
3522A	Token Ring, Local Bridge	1229	$ 4845.00
	Routers/Bridge Modules		
3800A	Multimedia Router (v10.0)	call	$ 5815.00
3800-05	Multimedia Router, Personality Module with support for Token Ring	1259	$ 4645.00
3805-02	Token Ring Router w/ Personality Module for port routing (3800 Routers)	1259	$ 1159.00
	FDDI Internetwork Modules		
3809	FDDI, Personality Module, for FDDI routing	1259	$ 3295.00
	Ethernet Network MGMT Modules		
3313SA	Ethernet, with Advanced Super Agent, 1 AUI	1251	$ 4459.00
3313A-04	Ethernet, with Advanced Agent, 1 AUI	1251	$ 3875.00
3313A-03	Ethernet, with Basic Agent, 1 AUI	1251	$ 2225.00
3314SA	Ethernet, with Advanced Super Agent, Fiber (1 10BASE-FIORL port)	1251	$ 4845.00
3314A-04	Ethernet, with Advanced Agent, Fiber (1 10BASE-FIORL port)	1251	$ 4265.00
3314A-03	Ethernet, with Basic Agent, Fiber (1 10BASE-FIORL port)	1251	$ 2615.00
	Token Ring Network MGMT Modules		
3517SA-08	Token Ring, with Super Advanced Agent, RI/RO (DB-9)	1257	$ 6009.00
3514-ST	Token Ring, with Advaced Agent, RI/RO (DB-9)	1257	$ 3875.00
3513	Token Ring, with Basic Agent, RI/RO (DB-9)	1257	$ 3099.00

Dynatech Communications
Remote Access Concentrators

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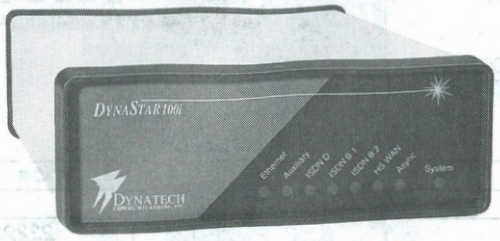
FAX

Model DS100I-PAK-1A



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DYNASTAR 100I FEATURES

- One ISDN BRI Interface (2 B Channel and 1 D Channel)
- One Ethernet Port
- One High Speed WAN Port (V.35/X.21/RS232)
- One Asynchronous Console Port for Configuration and Diagnostics (RS232)

Model DS100-PAK-1A

Faxline Document #:1207

DYNASTAR 100 FEATURES

- Two High Speed Wan Ports (V.35/X.21)
- One Ethernet Port
- One Synchronous/Asynchronous Port (RS232)
- One Asynchronous Console Port for Configuration and Diagnostics (RS232)

The DynaStar 100 is a multi-tasking, multi-microprocessored platform that provides LAN connectivity over wide area networks (WAN). Its hardware and software modules simultaneously support multiple LAN interfaces, WAN interfaces, and LAN/WAN applications.

The DynaStar 100i adds ISDN capability to the range of functions handled by the DynaStar 100. Six built-in software modules control each of the following applications:

ROUTERS

Provides IP/IPX routing between Ethernet or Token Ring LANs over synchronous point-to-point (PPP) lines, X.25 networks, and frame relay networks.

ETHERNET BRIDGES

As an Ethernet 802.3 bridge, both models provide spanning tree Ethernet-to-Ethernet remote-bridging (IEEE 802.1d) over synchronous point-to-point lines over X.25 or frame relay networks.

X.25 SWITCH AND CONCENTRATOR

Provides an X.25 DTE access line to an X.25 node and an X.25 DCE interface to support X.25 concentration and switching.

X.3, X.28, AND X.29 PAD

Provides X.3, X.28, and X.29 asynchronous PAD service to terminals connected to asynchronous ports and to a LAN workstation using IPX-Out service.

FRAME RELAY ACCESS

Provides an access line to a frame relay node.

ACCESS SERVER

Provides multiple services to and from Ethernet or Token Ring LANs over asynchronous lines or over an X.25 network. Inbound traffic may be asynchronous IPX or IP (SLIP) and Telnet. Outbound LAN workstation traffic is IPX or IP via Telnet.

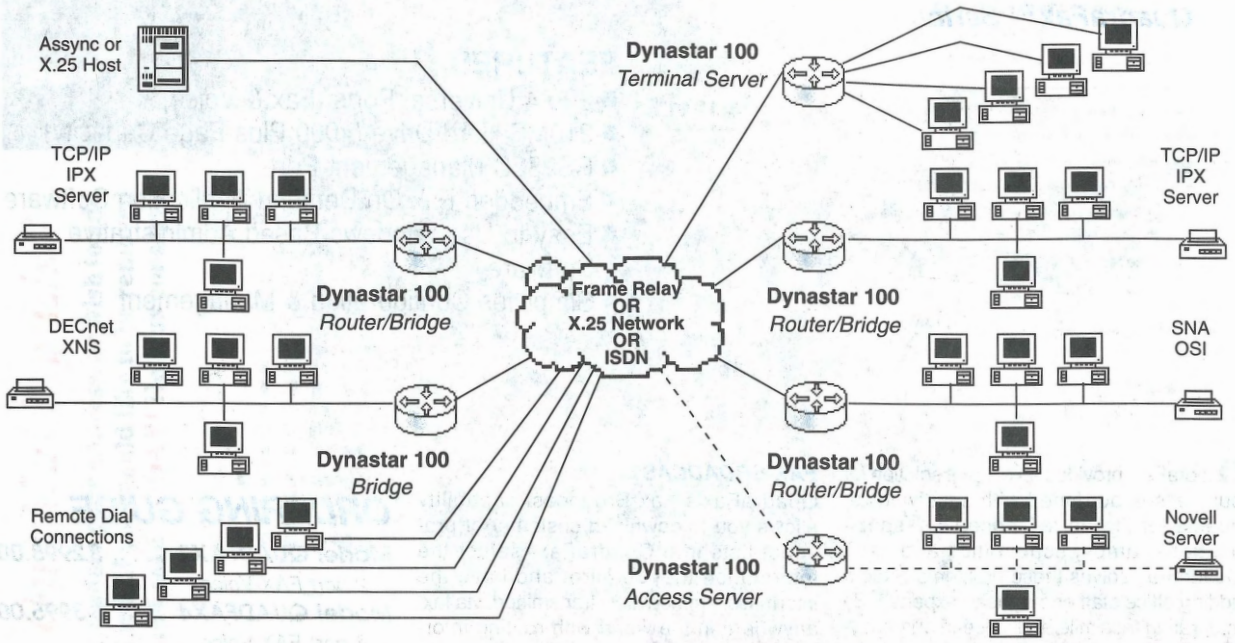
ISDN

The DynaStar 100i provides "dial on demand" LAN interconnections over an ISDN BRI interface (with 2 B channels or 1 D channel). Each B channel can be configured to support one of three WAN protocols, PPP, X.25, or frame relay, at transmission speeds of up to 64Kbps. The ISDN port is configured for dedicated use of the physical line, with a jumper-selectable option to share the line with up to seven other devices, including voice and facsimile devices.

BASE CONFIGURATION

The baseboard has a 25MHz Motorola 68360 RISC-based processor. 1MB of RAM (expandable to 16MB), 2MB of flash EPROM and 128KB of PROM. Configuration information is written into flash EEPROM.

Order Now!



ORDERING GUIDE

Model	Base Unit	1 ISDN (BRI) 2B, ID Channels	2 T1/E1	2nd Ethernet (AUI/RJ45)	8 Async	4 Sync/Async (RS-232)	Token Ring	ATM (DS-1)	4 Sync/Async (X.21/V.11)	Price
	Ports									
With ISDN										
DS100I-PAK-1A	x	x								$ 2495.00
DS100I-PAK-1B	x	x		x						$ 3490.00
DS100I-PAK-1C	x	x			x					$ 3490.00
DS100I-PAK-1D	x	x				x				$ 3690.00
DS100I-PAK-1E	x	x					x			$ 3990.00
With T1/E1										
DS100-PAK-1A	x		x							$ 2895.00
DS100-PAK-1B	x		x	x						$ 3890.00
DS100-PAK-1C	x		x		x					$ 3890.00
DS100-PAK-1D	x		x			x				$ 4090.00
DS100-PAK-1E	x		x				x			$ 4390.00
Separately available kits (for the PAK-1A units only)										
DS-ENET				x						$ 1240.00
DS-OCT+					x					$ 1240.00
DS-Q232R						x				$ 1390.00
DS-TOKEN							x			$ 1770.00
DS-ATMDSI								x		$ 2495.00
DS-Q21/11D									x	$ 2020.00

CONNECTIVITY KITS FOR DYNASTAR

All are male connectors

Model DS-ASYNC-CK . $ 50.00
1 Async RJ45 to DB25, includes RJ-69 cable, 10' and DB25 modular adapter

Model DS-232-CK..... $ 50.00
1 Sync includes 1 DB15 to DB25 conversion cable, 10'

Model DS-V35-CK .... $ 150.00
1 Sync includes 1 DB15 to 34 pin Winchester conversion cable, 6'

Model DS-V11-CK .... $ 50.00
1 Sync includes 1 DB15 to DB9 pin conversion cable, 10'

Model DS-10BASET-CK. $ 50.00
10-BaseT Level 5 RJ-45, 14' cable straight thru

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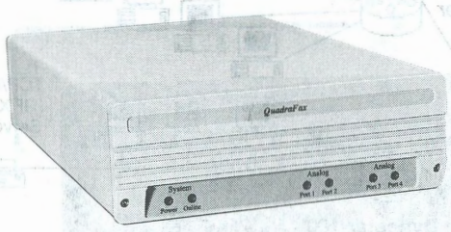

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FEATURES

- 2 to 4 Universal Ports (Fax & Voice)
- 210MB Hard Drive (4000 Plus Page Capacity)
- RS232C Management Port
- Embedded Fax On Demand Application Software
- Easy to Use Windows-Based Administrative Software
- Simplifies Configuration & Management

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ORDERING GUIDE

Model QUADFAX2 .... $2995.00
2 port FAX/Voice

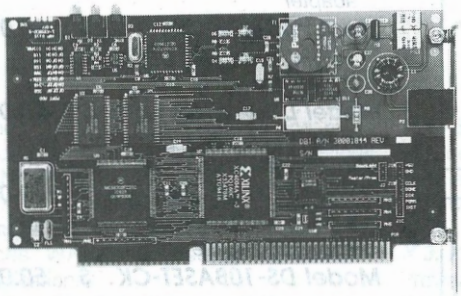
Model QUADFAX4 .... $3995.00
4 port FAX/Voice

Model BROADCAST ... $ 595.00
Software for QuadraFax

DigiBoard DataFire™

PC ISDN Card

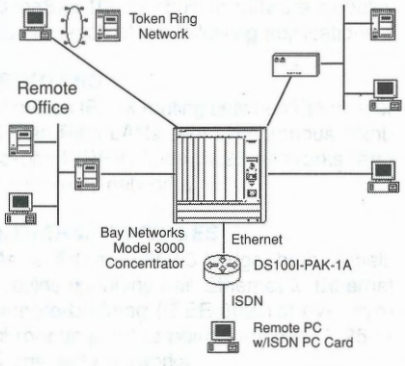
Model 77000314



Faxline Document #:1239

FEATURES

- Supports Two B Channels and One D Channel; B Channel Voice or Circuit-Switched Data Connections
- Supports "Nailed Up" Permanent Circuit-Switched B Channel
- Compatible with 64Kbps, 56Kbps and ISDN Voice Circuit-Switched Calls
- Compatible with All CCIT/ANSI BRI ISDN Central Office Switches
- Connects between ISDN Switches using Digital Dial-Up Voice Lines and Digital Trunking



DigiBoard's DataFire integrates an ISDN terminal adapter/network interface card with a line terminator (NT1) to provide breakthrough simplicity and affordability in high-speed remote LAN connections for individual computer users.

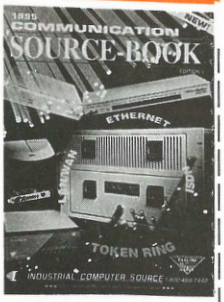
The DataFire installs in an expansion slot of ISA bus PCs and connects directly to an ISDN basic Rate Interface (BRI) phone line. Because there is no need for a line terminator or power supply, installation and maintenance are a snap.

ORDERING GUIDE

Model 77000314 ..... $ 595.00
16-bit ISA bus

Order Now!

This is a MUST!



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B ☐ Food & Beverage		J ☐ Plastics & Rubber	
C ☐ Electronics		K ☐ Pulp & Paper	
D ☐ Government		L ☐ Services	
E ☐ Machinery		M ☐ Telecommunications	
F ☐ Military		N ☐ Transportation	
G ☐ Mining & Metals		O ☐ Utilities	
H ☐ Petroleum		P ☐ Other _____	

6. In my business I am:

A ☐ End User	D ☐ Contractor	G ☐ Manufacturer
B ☐ OEM	E ☐ System Integrator	H ☐ Other _____
C ☐ Consultant	F ☐ Software Developer	_____

7. In the past, who have you purchased the following products from?

A. Industrial PC's: _____

_____

B. I/O Cards: _____

_____

C. Scientific/Engineering Software: _____

_____

8. What is your Total Budget for PC Products this year?

A ☐ Up to $5,000	C ☐ $20,001 - $50,000
B ☐ $5,001 - $20,000	D ☐ $50,000 and over

9. My product needs are: A ☐ Immediate B ☐ 3 - 6 months C ☐ Future

10. Please have an Application Sales Engineer call me: ☐ Check here

11. PC Products of Interest:

A ☐ Analog Digital I/O Cards	D ☐ Rack Mounted Computers
B ☐ Engineering Software	E ☐ PC Accessories
C ☐ Local Area Networking	F ☐ Other _____
	_____

12. My role in purchasing Products is:

A ☐ Recommend/Specify	C ☐ Purchase
B ☐ Authorize	D ☐ None

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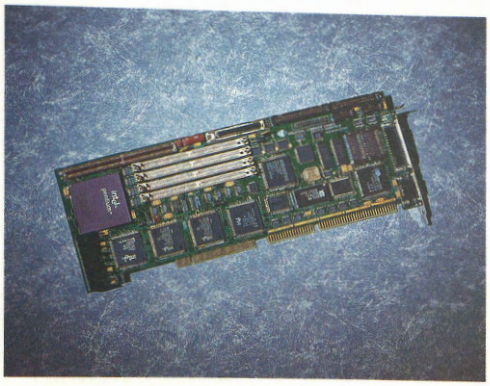
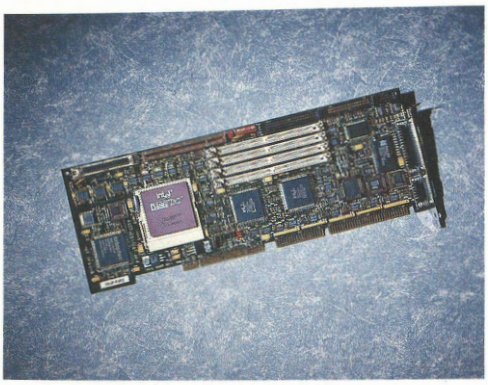


See page 8

ARIES 486 Single Board CPU



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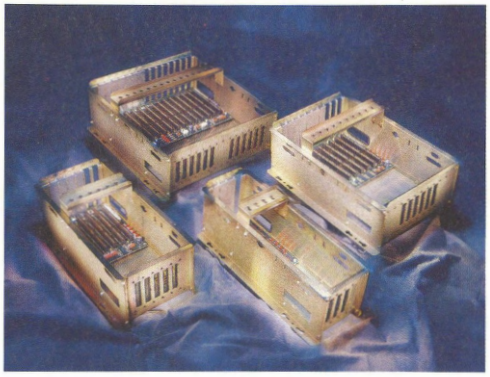
10,15 and 20 Slot Rack Mount Chasis

See pages . . . . . .16 - 24

4, 6, 10 and 15 Slot OEM Card Cages



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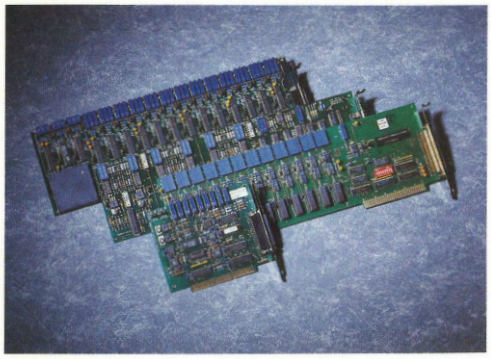
2, 6, 8, 12, & 16-Channel Analog Output Cards



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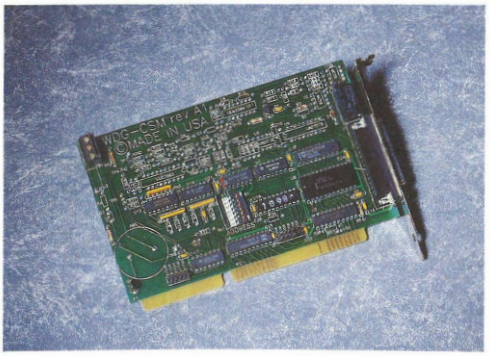
Multi-Function Watchdog Timer Card



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